The slaughter control on the productive cows on animal health division in food security, animal husbandry, and animal health service in Merauke Regency

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Abstract. One of the factors inhibiting the rate of increase in the cattle population of Merauke is cutting productive cows were higher as a result of the pressure to meet the demand for meat. This study aimed (1) to identify the factors driving the slaughter of productive female cows; (2) to identify the roles and steps taken by the Animal Health Sector; (3) to reveal the alternative steps which could be done to optimize the control on the slaughter of the female productive cows. The research used the qualitative approach and the research type was a case study, used the model data analysis of Miles and Huberman. The research results indicated that the role of Animal Health Division had been focused on the role of the apparatus to carry out coaching and socialization to butchers, to improve the capacity of the Human Resources or the personnel, to supervise the cows slaughtered either within or outside of slaughterhouse, to monitor the livestock traffics, and to handle the violations. The steps which had been taken were to implement the incentive activities and to safe the productive female cows to support the activities of UPSUS SIWAB and to follow up on the cooperation agreement with the Director-General of Animal Husbandry and Animal Health and with the National Police. The factors driving the slaughter of productive cows were the still very low economy of farmers and butchers, the low awareness of farmers about the importance of keeping productive cows, high demand for meat, cheap prices of cows, lack of supporting facilities, and many violations by slaughtering cattle outside the slaughterhouse. The alternative measures which could be taken were to conduct socialization to the farmers and village officials, to encourage the farmers to develop other livestock, to review the local regulations on transferring the productive female cattle, to continue the incentive activities for the pregnant cattle, to build livestock traffic posts to form an integrated team, and to implement the law enforcement, and to encourage the local beef markets by importing frozen beef policy.

1. Introduction
One of the factors inhibiting the rate of increase in cattle population in Merauke Regency is the slaughtering of productive female cows that are getting higher as a result of the insistence to meet the demand for meat. The percentage of cattle slaughtering in the Merauke Regency is quite high, reaching 16.99%. According to [1] the proportion of slaughter to the population does not exceed the tolerance limit of 12%, because it will disrupt beef supply and efforts to increase beef cattle
population, while [2], reports that the cause of the low growth of cattle population is among others due to the low productivity of productive females, as well as the high number of sales and slaughter of productive females.

Study based on [3] stated that slaughtering of productive age cows will experience a fairly high increase before the fasting month, and on feast days, whereas in other time periods productive slaughtering of females proportionately follows the fluctuation of cattle slaughtering at each slaughterhouse. While from the aspect of the trade, there is a tendency for female cattle prices to be cheaper when compared to the price of bulls. According to Rasminati et al [4], with the higher price of bulls on the market, slaughterers and cattle traders will tend to choose cattle that are cheap and easily available even though they are still in their productive age to be slaughtered.

The Animal Health Sector at the Merauke Regency's Food Security, Animal Husbandry and Animal Health Office is the field responsible for controlling productive slaughter cows through the Merauke Mopah Ruminant Animal Slaughterhouse, because besides functioning in providing ASUH meat, the Merauke Mopah Lama RPH also plays a role in conducting control of productive female cattle slaughter. According to [5], the RPH in addition to controlling zoonotic animal diseases, facilitating good meat distribution and environmental control of slaughtering waste, is also a place where no productive female cows are to be cut.

The implementation of controlling slaughter of productive cows in Merauke Regency itself cannot rely solely on slaughterhouses because in reality there are still often cases of slaughtering productive cows outside the abattoir. This study aims to determine alternative steps that can be taken in optimizing the control of productive female cattle slaughter.

2. Methods

2.1. Research approaches and types
This study uses a qualitative approach to explain alternative steps that can be taken by the Animal Health Sector at the Department of Food Security, Animal Husbandry and Animal Health of Merauke Regency in optimizing the control of productive female cattle slaughtering in Merauke district.

2.2. Research sites
The research was conducted at the Department of Food Security, Animal Husbandry and Animal Health of Merauke Regency, Rumopans Slaughterhouse (RPH-R) of Mopah Lama Merauke in Rimba Jaya Village, Merauke District and in other locations, namely breeders and slaughterers in Merauke Regency.

2.3. Research informant
To obtain information as a basis for formulating alternative steps in controlling slaughter of productive female cows by the Animal Health Sector, data collection was carried out on both official and technical officials from the Department of Food Security, Animal Husbandry and Animal Health of Merauke Regency, officials / other stakeholders. related to efforts to control slaughter of productive female cows in Merauke Regency, Butchers, and Breeders (sellers of productive female cows).

2.4. Data collection method
The data in this study were obtained from observations, interviews, documentation, and combined / triangulation.

2.5. Data analysis method
In this study, the data analysis model of Miles and Huberman is used. In analyzing this model according to [5], when conducting interviews, researchers have done an analysis of the answers given. If the respondent's answer is not satisfactory, the researcher will continue the question again until credible data is obtained. Furthermore, data processing and interpretation techniques are carried out
with the stages of Data Reduction (Data Reduction), Data Mapping (Data Display), Drawing Conclusions and Verification (Verification).

3. Results

3.1. Behavior and driving factors for butcher entrepreneurs slaughter productive cattle

Table 1 shows the comparison of the amount of meat production in RPH with the amount of meat sent out of the Merauke Regency in 2017. Data shows that the amount of meat sent out of Merauke Regency reaches 31 tons per month or 1.03 tons per day while the amount of meat produced from RPH-R Mopah Lama Merauke averaged only 1.2 tons per day.

**Table 1. Comparison of the amount of RPH meat production with the amount of meat shipment in 2017**

| Month  | Total Slaughter (in unit) | Meat production (kg) | Average Slaughter/day | Meat production/Day (kg) | Per Month (kg) | Average per day (kg) |
|--------|--------------------------|----------------------|-----------------------|--------------------------|----------------|---------------------|
| January| 255                      | 24.225               | 9                     | 808                      | 29.276         | 975.87              |
| February| 385                    | 36.575               | 13                    | 1.219                    | 30.010         | 1.000,33            |
| March  | 273                      | 25.935               | 9                     | 865                      | 28.847         | 961.57              |
| April  | 305                      | 28.975               | 10                    | 966                      | 28.078         | 935.93              |
| May    | 521                      | 49.495               | 17                    | 1.650                    | 30.487         | 1.016,23            |
| June   | 627                      | 59.565               | 21                    | 1.986                    | 34.976         | 1.165,87            |
| July   | 278                      | 26.410               | 9                     | 880                      | 29.089         | 969,63              |
| August | 314                      | 29.830               | 10                    | 994                      | 30.142         | 1.004,73            |
| September | 425                  | 40.375               | 14                    | 1.346                    | 30.539         | 1.017,97            |
| October| 353                      | 33.535               | 12                    | 1.118                    | 33.068         | 1.102,27            |
| November| 359                    | 34.105               | 12                    | 1.137                    | 32.504         | 1.083,47            |
| December| 708                     | 67.260               | 24                    | 2.242                    | 35.090         | 1.169,67            |

*With assumption, one cow is able to produce an average of 95 kg of meat

Butchers are required to provide large amounts of beef to meet the needs of meat both inside and outside Merauke Regency, and for that, they must find ways to be able to obtain cattle that will be slaughtered at once with low prices. One of the easiest methods for this purpose is to slaughter productive cows because to obtain productive cows from breeders will be very much easier and cheaper compared to bulls.

The average size of the weight of cattle bought by both slaughter and slaughterhouses ranges from 150 to 250 kilograms, with this size the price range of bulls is around IDR 8,000,000 to 10,500,000 while the price of a female cow is only around IDR 5,500,000 to 7,500,000. This causes the butchers to prefer buying cows than bulls because, with the same weight, the benefits are higher. Table 2 is an illustration of the comparison of the benefits of slaughtering male and female cattle with the same live weights based on carcass parameter data. This shows that by slaughtering cows, butchers will get greater benefits than cutting bulls.

**Table 2. Illustration Comparison of the benefits of slaughtering male and female cows with the same Life Weight in Merauke Regency**

| Description  | Female % | Kg | IDR | Male % | Kg | IDR |
|--------------|----------|----|-----|--------|----|-----|
| Life Weight  | 250      | 250 |     | 250    |   |     |
| Carcass weight | 48.98  | 122.45 | 51.54 | 128.85 |   |     |
So that the female cattle purchased by the slaughterhouse can be legally slaughtered at the slaughterhouse, then the slaughterer deliberately makes the productive cows become exhausted, difficult to stand or walk and even intentionally injure them before arriving at the slaughterhouse. If the cow is already in this condition, the Examining Officer will definitely allow the cow to be slaughtered.

It is known that female cows that are refused slaughter in RPH are usually not returned to livestock owners, but are brought home by slaughterers and slaughtered, and there are even productive female cows that are brought directly from breeders and slaughtered in slaughterhouses. Every slaughterhouse has a special place to slaughter cattle and to avoid officers, the location is usually hidden and moved around.

### 3.2. Knowledge and behavior of farmers

The driving factor for farmers to sell productive cows is for a variety of reasons, but the most basic thing is due to economic factors, this condition is also encouraged because farmers do not have other livestock options that can be sold immediately. The low number of livestock ownership is also another reason for breeders selling female cows.

The average breeders are aware of the prohibition of slaughtering productive female cows, although so far there has never been any socialization from technical service officials about how important it is to maintain productive female cows from being sold and regulations that prohibit slaughtering productive female cows. The breeders realize that by selling their productive female cows will reduce the opportunity to increase the number of cattle ownership.

### 3.3. Effect of intermediary or in-trader traders in slaughtering productive cows

The existence of inauguration, on the one hand, is very helpful for farmers to get cash if needed in a fast time. But in general, the process of determining prices is always associated with the urgency of the needs of farmers, so that farmers will only act as price recipients, because the bargaining position of the bargain is weak, even not infrequently harming farmers. The position of the inauguration can be said to be very dominant because its function is to connect the breeders with the slaughterer, sometimes the inauguration will be free to determine the price of cattle to the slaughterhouse to obtain profits for themselves.

Table 3 is data on cattle receipts as well as data on cattle that are rejected for slaughtering in the Mopah Lama Merauke RPH-R in 2017. When slaughterers use the service of the inauguration in finding cattle than to minimize the high transportation costs, usually inauguration will buy cattle in

| Product              | Parameter     | Value 1 | Value 2 |
|----------------------|---------------|---------|---------|
| Meat                 | 77.24, 94.58, 9,895,136 | 77.24, 99.52, 9,454,755 |
| Bone                 | 22.76, 27.87, 1,532,829 | 22.76, 29.33, 1,612,944 |
| Red Viscera          | 7.58, 18.95, 1,326,500 | 7.58, 18.95, 1,326,500 |
| Clean Green Offal    | 11.95, 29.88, 1,344,375 | 11.95, 29.88, 1,344,375 |
| Acceptance (1)       | 11,844,465    | 12,394,200 |
| Buy a cow            | 7,500,000     | 10,500,000 |
| Cost of labor        | 150,000       | 150,000   |
| RPH levies           | 100,000       | 100,000   |
| Pay subordinates     | 125,000       | 125,000   |
| Etc                  | 200,000       | 200,000   |
| Expenditures (2)     | 8,075,000     | 11,075,000 |
| Net-Results (1 - 2)  | 3,769,465     | 1,319,200 |

Note: - Percentage of carcass obtained from carcass parameter data
- The percentage of meat and jelly is calculated from the carcass weight.
- Bone percentage is the difference in the percentage of carcass and meat weight
- Price: meat / kg = IDR 95,000, Bone / kg = IDR 55,000, red broth / kg = 70,000, clean green broth / kg = IDR 45,000
large quantities at once regardless of sex and reproductive status of cattle. Regardless of whether they are prohibited or not prohibiting the slaughter of productive cows, they usually tend to look for the cheapest cows, so the cows are bought. If then the cows are refused to be slaughtered, then the butcher will still cut it outside the abattoir.

### Table 3. Data on the Acceptance of Cattle in RPH-R Old Mopah Merauke in 2017.

| Month    | Entered Male | Entered Female | Slaughtered Male | Slaughtered Female | Rejected | Amount |
|----------|--------------|----------------|------------------|-------------------|----------|--------|
| January  | 117          | 189            | 306              | 117               | 138      | 255    |
| February | 201          | 243            | 444              | 201               | 184      | 385    |
| March    | 127          | 225            | 352              | 127               | 146      | 273    |
| April    | 156          | 216            | 372              | 156               | 149      | 305    |
| May      | 245          | 341            | 586              | 245               | 276      | 521    |
| June     | 329          | 389            | 718              | 329               | 298      | 627    |
| July     | 134          | 201            | 335              | 134               | 144      | 278    |
| August   | 151          | 221            | 372              | 151               | 163      | 314    |
| September| 176          | 318            | 494              | 176               | 249      | 425    |
| October  | 173          | 251            | 424              | 173               | 180      | 353    |
| November | 184          | 253            | 437              | 184               | 175      | 359    |
| December | 392          | 399            | 791              | 392               | 316      | 708    |
| Total    | 2,385        | 3,246          | 5,631            | 2,385             | 2,418    | 4,803  |

Source: Secondary data processing of Revenue Data and Cutting Data of Merauke Old Mopah RPH-R

### 4. Discussion

This research shows that economic factors are the main cause so that slaughterers are encouraged to dare to do slaughtering productive female cows, this is in accordance with the opinion of [6], that in addition to working environmental factors, economic factors become one of the things that motivate butchers to choose to buy a productive female cow. Although they realize it is prohibited, but because they are tempted to obtain high profits, the ban was ignored. Likewise, with breeders, the urgent need for cash funds encourages farmers to sell their female cows, despite the low level of livestock ownership so that farmers do not have the option to sell their cattle. According to [7], the high sales and slaughter of female cows are due to the low awareness of breeders to maintain female cows. The fact of the matter is this actually makes the female cows become unproductive and can even experience permanent reproductive disorders. Economic factors also cause the inaugurators to be the drivers of violations of the slaughter of productive cows. In order to immediately get their wages for providing cattle to slaughterers, they no longer care about the condition of the animals they buy, especially for cows that are still productive, because later if the cows are rejected or not, it is not their responsibility. Female cattle are relatively cheaper and more profitable, even if based on carcass size, bulls show a higher percentage. A report written in 2012 [8] found that the average percentage of male carcasses was 51.54% and females were 48.98%. The results of a comparison of the advantages of selling bulls and bulls using the percentage data show that it turns out that selling meat resulting from slaughtering cows gives a considerable advantage compared to cutting bulls. This is in line with the opinion that another reason for the cause of slaughtering productive cows is the price of female cows which are relatively cheaper than the price of bulls [9].

Another factor that drives the occurrence of breach slaughtering productive female cows is the high slaughter of cattle outside the abattoir. Cows rejected for slaughtering in Mopah Lama Merauke RPH-R in 2017 reached 828 cows or as many as 69 cows per month on average. If the figure is the number of productive cows that are slaughtered outside the RPH, the percentage reaches 14.70% of the total number of cattle slaughtered, it could even be more than that. The unavailability of means of animal checkpoints indirectly also drives the slaughter of productive female cows.
Alternative steps that can be applied in efforts to control productive cows are Provision of socialization for breeders to foster a sense of concern, especially from aspects of animal welfare, in order to protect animal rights as God's creatures, with approaches through various dimensions such as culture, ethics, science, religion and politics involve community leaders, religious leaders, scientists and politicians. Socialization also needs to be done to village officials so that in issuing a certificate of sale and purchase of livestock really pay attention to the condition of livestock in terms of age and reproduction. If necessary, village officials can refuse to issue letters of sale and purchase from the applicant. The breeder's community must also be encouraged to be able to develop other livestock businesses such as free-range chickens, as a reserve if they need a small amount of cash. If this can be pursued by the government, then when there is an urgent need for cash, these needs can be met without having to sell productive cows.

The Government of Merauke Regency needs to review Regional Regulation No. 6 of 2011 concerning Regulations on the Transfer and Prohibition of Productive Cattle and/or Buffaloes, especially for the consideration of protecting populations. If there is a government policy to grant a permit for the expenditure of productive cows within certain quota limits, this will at least affect the price of productive cows. It is hoped that, due to the need for productive female cows as broodstock, the price of female cows can slowly be pushed up.

Implementation of productive female cattle incentive activities carried out in 2011 to 2013 and SIWAB in 2017 in Merauke Regency is quite successful and if this activity can be carried out routinely every year it can certainly motivate farmers not to sell their productive cows to slaughterers or broker. Another alternative is to build a livestock traffic post or checkpoint. This checkpoint will later become the main filter to capture productive female cows that are transported to the Merauke Mopah Old RPH-R. Its location must be in a strategic area and followed by regulations governing that cattle transport vehicles must go through postal checks and complete documents from transported animals.

According to [10] said that the supervision of cattle slaughtering which was very lacking by officials both at Slaughterhouses and other Slaughterhouses caused the slaughter of productive female livestock, therefore in an effort to supervise slaughtering cattle outside the RPH, it is necessary to establish a supervisory team stipulated through a Regent Decree. This team must consist of at least the Office officials, elements of the civil service police unit and the Police Apparatus, and are expected to establish good communication and coordination so that the implementation of supervision will run effectively. Currently the Government still always uses a coaching approach to the Butchers who violate, but this does not seem to change their behavior. Law enforcement efforts for perpetrators of Productive Cattle Slaughtering violations must one day continue to be carried out so that the aim of accelerating the increase in cattle population can be achieved.

The Merauke Regency Government needs to take steps to coordinate with the regional government that supplies beef from the Merauke Regency, particularly the Jayapura and Timika regions, along with the Papua provincial government to be able to supply imported frozen meat that is much cheaper than the local meat price, so that this effort can slowly suppress the high price of local beef from Merauke in these regions. This policy needs to be taken because if the price of local beef can go down, the interest of slaughterers to send local beef outside the Merauke Regency region will also decrease, and this will indirectly affect the activity of slaughtering productive female cows.

5. Conclusion

Recommendations related to the steps that can be taken by the animal health sector in implementing the control of slaughtering productive female cows are by conducting socialization to the community of farmers and village officials, encouraging farmers to want to develop alternative livestock businesses, reviewing local regulations on the regulation of productive female cows, continuing incentive activities for pregnant cattle, Building a Livestock Traffic Post, forming an Integrated Team to control productive female cattle slaughter, and enforcing the law in accordance with applicable regulations, as well as coordinating with the local Government that supplies beef from Merauke.
Regency. There needs to be government support in the form of an adequate budget, an evaluation of the various steps that have been taken, and a guideline for implementing good productive slaughter cows control.

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