

Conference Paper

CASES OF REPRODUCTION DISORDER IN BEEF CATTLE OF MODO DISTRICT, LAMONGAN IN 2015

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Abstract

The aim of this research is to discover how several factors – namely feed, age, and parity might contribute toward cases of reproduction disorder in beef cattle of Modo District, Lamongan in 2015. Materials used in this research are data obtained from five villages, showing 340 out of 3.331 animals exhibiting reproduction disorder symptoms. The method used for this research is the survey method, and primary and secondary data were obtained. Primary data were obtained from field surveys of interviewing farmers, local animal health officials and artificial inseminators. Secondary data were obtained from examination for reproduction disorder in beef cattle by the Livestock and Animal Health Service of Lamongan. The data obtained were then tabulated and analyzed with the regression tree method using Windows Statistical Product and Service (SPSS) to determine the main cause of reproduction disorder in beef cattle of Modo District, Lamongan in 2015. The results show that feed is the main factor contributing to reproduction disorder in beef cattle of Modo District, Lamongan, while age and parity showed a less significant role.

Keywords: Beef cattle, feed, age, parity, reproductive disorders.

1. Introduction

Cattle is one of the livestock that plays an important role for human needs, both the need for animal protein and the benefits in various areas of life such as industry and agriculture so that can not be released from human life because it has become a basic household needs. Meat consumption in Indonesia continues to increase. However, the increase is not matched by adequate meat production so that meat imports are always carried out to meet national meat needs. In meeting the needs of meat the government

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seeks to increase the population of beef cattle one of them by way of coping with cases of reproductive disorders [1].

The success of reproduction strongly supports the increase in beef cattle population. However, people's livestock business, often found cases of reproductive disorders characterized by low fertility, the result is a decrease in pregnancy rate and the number of calves birth, thus affecting the decline in cattle population and supply of meat supply nationally. It is estimated that by 2020 Indonesia does not have any more cattle to be cut, meaning that the need for beef depends entirely on imports [2].

One of the obstacles of livestock business today is the number of reproductive disorders to infertile in female cattle. As a result, the reproductive efficiency will be low as well as the sluggish development of livestock populations and the high infertility in cattle. Good livestock management is required to increase reproductive effectiveness resulting in high reproductive efficiency followed by high livestock productivity [3].

It is necessary to establish an effective reproductive health program in livestock to produce better reproductive efficiency, thereby increasing the income of breeders more than ever before. In tackling a case of reproductive disorders in livestock, the effort that needs to be encouraged is to implement a reproductive health program, prepared with livestock data on reproductive disorders. In the field of livestock, Lamongan District has a large contribution to the beef cattle population of 101,790 [4]. Sub-district Modo itself has a cattle population of 8,884 in December 2015. Based on the results of the case of beef cattle reproduction disorder in Modo Sub-district by the Animal Husbandry and Animal Health Service of Lamongan District, reported the incidence of reproduction disorder is high enough that reaches 600 of the total 3,331 adult female beef cattle [5].

Considering the number of reproductive disturbances of beef cattle in Sub-district Modo of Lamongan District, it is necessary to conduct research to find out the main cause of reproduction disorder among some factors such as feed, age and parity that happened in Sub-district Modo of Lamongan District.

2. Materials and Methods

This research was conducted at Modo Sub-district of Lamongan District, research time for 2 months from February 15, 2016 until April 15, 2016 for primary data collection in the form of interview with breeder and secondary data from Animal Husbandry and Animal Health Service of Lamongan District.

TABLE 1: Data on adult female beef cattle affected by reproductive disorders in Sub-district Modo of Lamongan District in 2015.

No	Village	Amount of Akseptor	Reproductive disorders				Amount of examination
			Hypofunction ovarian	CL persistant	Ovarian cysts	Silent Estrus	
1	Mojorejo 1	191	127	40	1	23	191
2	Pule	127	60	30	0	37	127
3	Yungyang	99	30	26	0	43	99
4	Mojorejo 2	61	18	13	0	30	61
5	Sambangan	112	31	23	0	68	112
Amount		600	226	132	1	201	600

The method used in this research is survey method. The data taken are primary data and secondary data. Primary data: obtained from field surveys and interviews with farmers and animal health workers and AI officers. Secondary data: obtained from the results of examination of reproductive disorders of beef cattle by the Department of Animal Husbandry and Animal Health Lamongan District.

The data obtained in this study is tabulated and analyzed using regression with the application of Windows Statistical Product and Service (SPSS) to find out the main cause of reproductive disorder in Kecamatan Modo of Lamongan District in 2015.

3. Results

The results of data obtained from secondary data in the number and types of reproductive disorders of beef cattle from various villages in Sub-district Modo. With a total of 600 adult female cows affected by reproductive disorders of a total of 3,331 adult female cows. The results of a survey from the Animal Husbandry and Animal Health Service of Lamongan District showed that the reproductive disorder of ovarian hypofunction with total number of 226 of beef cattle, CLP 132 beef cattle, ovarian cyst 1 of beef cattle and silent estrus 201 of beef cattle. (Table 1).

The results of data obtained from primary data with interviews to breeders in the form of data type and number of reproductive disorders of beef cattle in Sub-district Modo based on age factor. With a total of 340 adult female cows affected by reproductive disorders of the total number of all female adult cows in Modo Sub-district is 3,331 with details of reproductive disorders of Hypofunction ovarian with a total of

TABLE 2: Type and number of reproductive disorders by age factor.

No	Factor	Reproductive disorders				Amount
		Hypofunction ovarian	CL persistent	Ovarian cysts	Silent estrus	
1	2	47	20	0	32	99
2	3	43	24	0	39	106
3	4	16	6	1	17	40
4	5	17	20	0	18	55
5	6	8	4	0	12	24
6	7	4	3	0	5	12
7	8	1	0	0	1	2
8	9	0	0	0	2	2
	Amount	136	77	1	126	340

TABLE 3: Type and number of reproductive disorders based on feed factors.

No	Factor	Reproductive disorders				Amount
		Hypofunction ovarian	CL persistent	Ovarian cysts	Silent estrus	
1	Hay	138	77	1	104	320
2	<i>I. cylindrical</i> (Rumput lapangan)	0	0	0	20	20
	Amount	138	77	1	124	340

136 beef cattle, CLP 77 beef cattle, cysts ovary 1 beef cattle and silent estrus 126 beef cattle. (Table 2)

The results of data obtained from the primary data with interviews to breeders in the form of data types and number of reproductive disorders of beef cattle in Kecamatan Modo Lamongan based on feed factor. With a total of 340 adult female cows affected by reproductive disorders of the total number of all female adult cows in Modo District ie 3,331, with details of reproductive disorders of ovarian hypofunction with a total of 136 beef cattle, CLP 77 beef cattle, cysts ovary 1 beef cattle and silent estrus 124 beef cattle. Beef cattle fed with straw is recorded with a total of 320 of beef cattle affected by reproduction disorders and for field grass feed recorded 20 beef cattle. (Table 3).

The results of data obtained from the primary data with interviews to breeders in the form of data type and number of reproductive disorders of beef cattle in Sub-district Modo based on the parity factor. With a total of 340 adult female cows affected by reproductive disorders of the total number of all female adult beef cattle in Modo

TABLE 4: Type and number of reproductive disorders based on the parity factor.

No	Factor	Reproductive disorders				Amount
	Parity	Hypofunction ovarian	CL persistant	Ovarian cysts	Silent estrus	
1	0	55	21	0	37	113
2	1	39	22	0	32	93
3	2	16	7	1	15	39
4	3	17	18	0	18	53
5	4	7	5	0	15	27
6	5	4	3	0	4	11
7	6	1	0	0	1	2
8	7	0	0	0	2	2
	Amount	139	76	1	124	340

District ie 3,331 with details of reproductive disorders of ovarian hypofunction with a total of 139 beef cattle, CLP 76 beef cattle, cysts ovary 1 beef cattle and silent estrus 124 beef cattle. (Table 4).

The data used to determine the main cause of the three factors causing reproductive disorders such as age, feed and parity in this study were beef cattle that experienced reproductive disorders as many as 340 from various villages in Kecamatan Modo Lamongan District from the number of adult female cattle as many as 3,331. The data obtained were analyzed using tree regression with the application of Windows Statistical Product and Service (SPSS). From the statistical processing result of tree regression, it is found that the main factor of reproduction disorder in beef cattle in Kecamatan Modo of Lamongan Regency in 2015 is feed because of lack of nutrient content in feed given to beef cattle, while for age and parity less influence to reproduction of beef cattle because not uniformity of age or parity in this research.

From the results of research of cows affected by reproductive disorder in Sub-district Modo obtained the result that the given feed that is straw and field grass, both have low nutrients that cause nutritional deficiency that causes the occurrence of reproductive disorders. Working mechanism of feed loss in livestock can cause reproductive disorder that is decreasing all glands in beef cattle, especially anterior pituitary gland become hypofunction, followed by decrease gonadotropin hormone secretion, that is FSH and LH. Decreased hormone FSH and LH cause the decrease in ovarian activity and not the growth of follicles characterized by the onset of anestrus, ovulation disorder

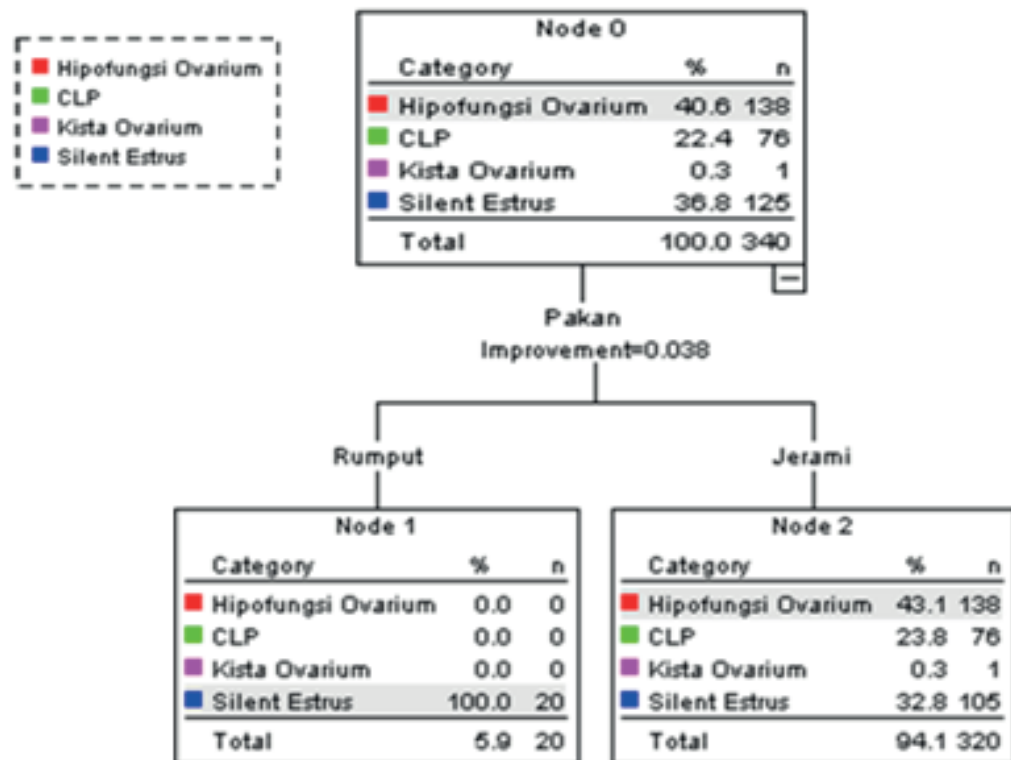


Figure 1: The results of tree regression analysis on various factors causing reproductive disturbance of beef cattle in Sub-ditric Modo of Lamongan District in 2015.

produces an abnormal ovum and impaired fertilization resulting in imperfect embryos [6].

Parity has little effect on reproduction disorder in Kecamatan Modo of Lamongan District. In this study it is assumed that the lack of parity influence on beef cattle reproduction disorder is due to the uniformity of the parity quantity in this study, as well as age, less influence on reproductive disorder.

4. Conclusion

Based on the result of research, it can be concluded that feeding factor as main factor cause reproduction disorder in the form of **Hypofunction ovarian**, CL persistent, ovarian cysts, silent estrus while parity and age have less influence to reproduction disorder case in Modo Subdistrict of Lamongan District in 2015.

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