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Cases of Reproduction Disorder of Beef Cattle at 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

Beef 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, this increase is not matched by the meat production required for national meat needs. (Direktorat Jendral Peternakan, 2016).

The success of reproduction strongly supports the increase in beef cattle population. However in farmer's livestock business cases of reproductive disorder characterized by low fertility of mothers is commonly found, resulting in decreasing pregnancy rate and the number of calves birth, thus affecting the decline of 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 is completely dependent on imports (Wurlina, 2009).

One of the obstacles of livestock business today is the number of reproductive disorders leading to infertility 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 beef cattle. Good livestock management is required to increase reproductive effectiveness resulting in high reproductive efficiency followed by high livestock productivity (Hayati dan Choliq, 2009).

It is necessary to establish an effective reproductive health program for livestock in order to produce better reproductive efficiency, thereby increasing the income of farmers more than ever before. In tackling cases of reproductive disorders in livestock, a venture that needs to be encouraged is to implement a reproductive health program, prepared with livestock data on reproductive disorders. In the

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field of livestock, Lamongan District has a large contribution to the beef cattle population of 101,790 (Dinas Peternakan dan Kesehatan Hewan Provinsi Jawa Timur, 2016). Kecamatan Modo itself has a cattle population of 8,884 in December 2015. (Dinas Peternakan dan Kesehatan Hewan Kabupaten Lamongan, 2015).

Based on the results of the case of reproduction case of beef cattle in Modo District by the Animal Husbandry and Animal Health Service of Lamongan, reported the incidence of reproduction disorder reaches 600 cattle from total of 3,331 adult female beef cattle, (Dinas Peternakan dan Kesehatan Hewan Kabupaten Lamongan 2015).

Considering the number of reproduction disorder of beef cattle in Modo District of Lamongan, it is necessary to do research to find out the main cause of reproduction disorder among several factors such as feed, age and parity that happened in Modo District of Lamongan.

2. MATERIALS AND METHOD

2.1 Time and Place of Study

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

2.2 Study Method

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 breeders and veterinary workers and artificial inseminators. 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..

2.3 Research Variable

Research variable observed is the number of female beef cattle in Modo District, Lamongan having reproductive disorder.

2.4 Data Analysis

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

3. Results and Discussion

This research is done by taking primary and secondary data. This research was conducted in Modo District of Lamongan, research time for 2 months from 15 February 2016 until 15 April 2016 for primary data collecting in form of interview with breeder, animal health officer and artificial inseminator and secondary data from Animal Husbandry and Animal Health Office of Lamongan 2015.

Table 3.1 Data of adult female beef cattle affected by reproductive disorder in Modo District, Lamongan in 2015

Village	Number of Acceptor	Reproductive Disorder				
		Ovarium Hypofunction	CLP	Ovary Cyst	Silent Estrus	Total Examination
Mojorejo 1	191	127	40	1	23	191
Pule	127	60	30	0	37	127
Yungyang	99	30	26	0	43	99
Mojorejo 2	61	18	13	0	30	61
Sambangan	112	31	23	0	68	112
Total	600	226	132	1	201	600

The results of data obtained from secondary data in the number and types of reproductive disorder of beef cattle from various villages in Modo District Lamongan. With a total of 600 adult female cows affected by reproductive disorders of a total of 3,331 adult female cows in Modo District. The results of a survey from the Animal Husbandry and Animal Health Service of Lamongan District showed that the reproductive disorder of ovarium hypofunction with a total of 226 beef cattle, persistent corpus luteum 132 beef cattle, ovarian cyst 1 beef cattle and silent estrus 201 beef cattle. (Tabel 3.1).

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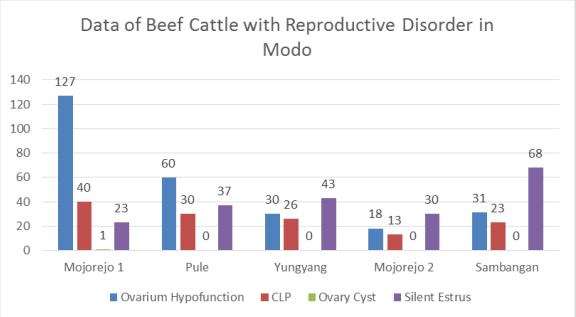

Fig. 3.1 Diagram of the number of female adult beef cattle affected by reproductive disorders from various villages in Modo district Lamongan in 2015.

The results of data obtained from the primary data with interviews to farmers in the form of data type and number of reproductive disorders of beef cattle in Modo District, Lamongan based on age factor. With a total of 340 adult female cows affected by reproductive disorders of the total number of 3,331 adult female beef cattle in Modo District, with details of reproductive disorders of ovarian hypofunction with total 136 beef cattle, CLP 77 beef cattle, ovary cysts 1 beef cattle and silent estrus 126 beef cattle. (Table 3.2).

Table 3.2 The type and amount of reproductive disorders by age factor

Factor	Reproductive Disorder				Total
Year (tahun)	Ovarium Hypofunction	CLP	Ovary cysts	Silent estrus	
2	47	20	0	32	99
3	43	24	0	39	106
4	16	6	1	17	40
5	17	20	0	18	55
6	8	4	0	12	24
7	4	3	0	5	12
8	1	0	0	1	2
9	0	0	0	2	2
Total	136	77	1	126	340

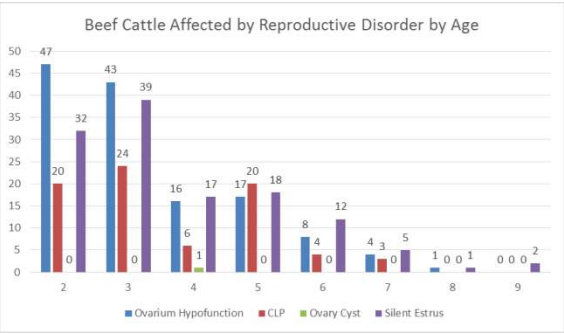

Figure 3.2 Diagram of the number and types of reproductive disorders by age factor

The results of data obtained from the primary data with interviews to farmers in the form of data type and number of reproductive disorders of beef cattle in Modo District Lamongan based on feed factor. With a total of 340 adult female cows affected by reproductive disorders of the total number of adult female beef cattle in Modo District ie 3,331 heads, with details of reproductive disorders of ovarian hypofunction with total 136 beef cattle, CLP 77 beef cattle, cysts Ovary 1 beef cattle and silent estrus 124 beef cattle. Beef cattle fed with straw was recorded with a total of 320 head of beef cattle affected by reproduction disorders and for field grass feed recorded 20 beef cattle. (Table 4.3).

Table 3.3 The type and amount of reproductive disorders by feed factor

Factor	Reproductive Disorder				Total
Feed	Ovarium Hypofunction	CLP	Ovary cysts	Silent estrus	
Straw	138	77	1	104	320
Field grass	0	0	0	20	20
Total	138	77	1	124	340

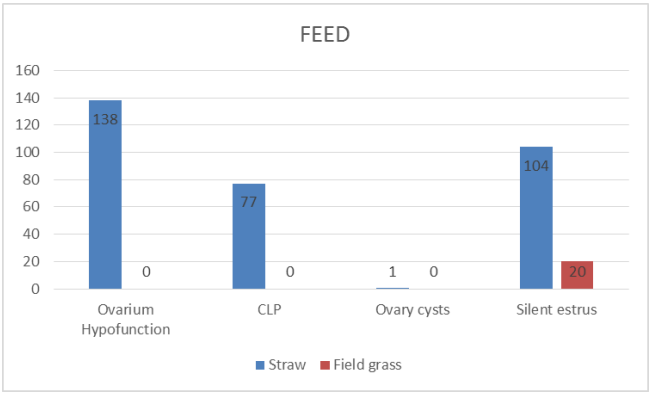

Figure 3.3 Diagram of the number and types of reproductive disorders by feed factor

The results of data obtained from the primary data with interviews to farmers in the form of data type and number of reproductive disorders of beef cattle in Modo District Lamongan 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 cows in Modo 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 3.4).

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Table 3.4 The type and amount of reproductive disorders by parity factor

Factor	Reproductive Disorder				Total
Parity	Ovarium Hypofunction	CLP	Ovary cysts	Silent estrus	
0	55	21	0	37	113
1	39	22	0	32	93
2	16	7	1	15	39
3	17	18	0	18	53
4	7	5	0	15	27
5	4	3	0	4	11
6	1	0	0	1	2
7	0	0	0	2	2
Total	139	76	1	124	340

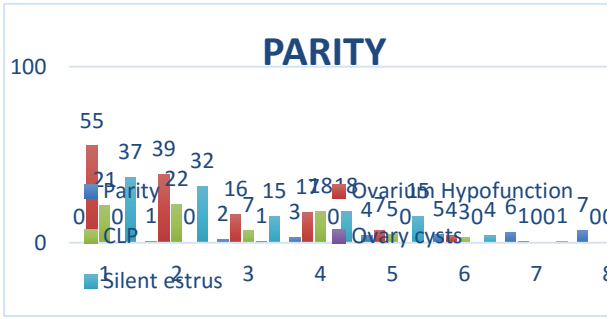


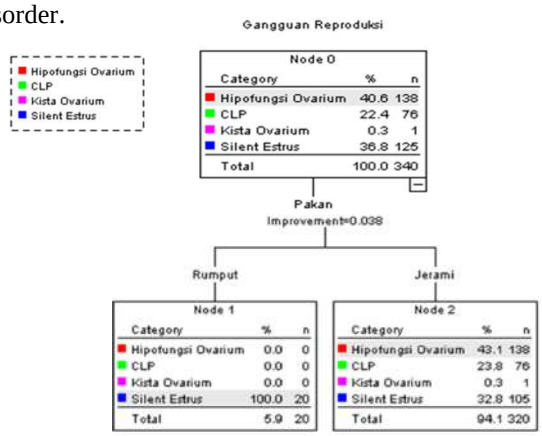
Figure 3.4 Diagram of the number and types of reproductive disorders by parity factor

The data used to determine the main cause among the three factors causing reproductive disorders such as age, feed and parity in this study are beef cattle that have reproductive disorders as much as 340 head of beef cattle from various villages in Modo District Lamongan from the number of adult female cattle as many as 3,331 tail. The data obtained were analyzed using tree regression with Windows Statistical Product and Service (SPSS) application.

From the statistical processing of tree regression, it is found that the main factor of reproduction disorder in beef cattle in Modo District Lamongan 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 disorders in Modo District Lamongan obtained the results that the given feed that is straw and field grass, both have low nutrients that cause nutritional deficiencies that cause the occurrence of reproductive disorders. The mechanism of feed loss in livestock can cause reproductive disorder that is decreasing all glands in beef cattle, especially anterior pituitary gland become hipofungsi, followed by decrease gonadotropin hormone secretion, that is FSH and LH. Decreased hormones FSH and LH cause decreased activity of ovary and not the growth of follicles characterized by the onset of anestrus, ovulation disorders produce abnormal eggs and impaired fertilization produce imperfect embryos (Hariadi, et al, 2011).

Parity has less influence on reproduction disorder in Modo District Lamongan. In this research, it is assumed that the lack of parity influence on beef reproduction disorder is caused by the uniformity of the parity quantity in this study, as well as the age, less influence on reproduction disorder.



6. Conclusions

Based on the result of the research, it can be concluded that feeding factor as the main factor causing reproduction disorder are ovarian hypofunction, CLP, ovarian cyst, silent estrus, while parity and age have less effect on reproduction disorder in Modo District Lamongan 2015.

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