

## Conference Paper

# CASE STUDY: DYSTOCIA ON BEEF CATTLE IN KUNIR REGENCY OF LUMAJANG DISTRICT, EAST JAVA, INDONESIA IN 2015 AND 2016

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## Abstract

Dystocia defined as difficulty of birth. Cattle that experienced dystocia characterized by extended processing time of birth, difficult, and impossible to do without help of human stem. This study aimed to determine the number and causative factor of dystocia in beef cattle in Kunir sub district, Lumajang district. Data acquisition used primary data and secondary data. Primary data was obtained from direct observations about management of maintenance, then interviewed the farmers in Kunir sub district. Secondary data was data obtained from the recording belongs to animal health technical officer. The results showed that the prevalence of dystocia in Kunir district, Lumajang district as many as 63 cases or 11,6 % of 543 births. The result of the research is analyzed using chi square ( $\chi^2$ ) method on SPSS 20.0 program and risk factors that increase the incident of dystocia were IB semen which greater than the cattle site, the position of the fetus and inertia uteri can result in weakness of the catrle at the age of older and more likely to give birth.

**Keywords:** Dystocia; beef cattle.

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## 1. Introduction

Reproductive disorders in cattle can be caused by various factors, including non-infectious agents [1] and infectious agents [2-4]. Specifically, for reproductive disorders caused by infectious agents or infectious diseases, according to [5] explains that infectious reproductive diseases can cause an abortion, pyometra, endometritis, embryonic death, placental retention, central nervous breakdown of the fetus, sterility in Bull. Due to reproductive disorders in livestock will cause economical impact for

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farmers and decrease the rate of livestock population in the country. Common reproductive disorders of cattle include secundary retensio [7], dystocia (birth difficulties) [8], abortion ([miscarriage,9], and premature / premature birth [10-11]. Dystocia is a difficulty birth process caused by parent or fetus factor. The cause of difficulty in cattle birth involves three main factors: a deficit power from the mother to excrete fetuses [12], presence of birth defects in the parent [13], and abnormalities in the fetus [14]. The incidence of dystocia generally occurs in cattle that give birth first (prempara) rather than cattle that have several times of birth (pluripara) [15]. This study was conducted to determine the case of dystocia and factors that cause it in Kunir District Lumajang Regency Year 2015 and 2016.

## 2. Materials and Methodes

### 2.1. Methods

This research was conducted in Animal Health Technical Officer of Kunir Sub-district, Lumajang Regency. The material used in this research is the data of cattle which experienced dystocia from all cases of reproductive disorder in 2015 and 2016. The method used in this research is descriptive method with primary data and secondary data. Primary data was obtained from direct observation of maintenance management, then interviewed by farmer.

### 2.2. Analisis Data

The collected data is present in tabular form and the result describe with descriptive form. Furthermore, to analyze the factors that cause the case of dystocia using statistical analysis Chi Square.

## 3. Results

The number of dystocia cases in beef cattle that occurred during two years 2015 and 2016 in Kunir sub district, Lumajang District can be seen in Table 1 and Figure 1.

Based on Table 1. The case of dystocia in beef cattle in 2015 shows that 38 cases or 12.4% and 25 cases or 10.6% cases of dystocia in 2016. The number of births from the two years shows 543 with 63 cases or 11.6% dystocia. Beside that, Eutocia in 2015 shows 269 cattles and then in 2016, 211 cattles with eutocia.

TABLE 1: Number of dystocia cases in beef cattle in Kunir sub district, Lumajang District.

Year	Birth	Dystocia	Eutocia
2015	307	38 (12,4 %)	269 (87,6 %)
2016	236	25 (10,6 %)	211 (89,4 %)
Total	543	63 (11,6 %)	480 (88,4 %)

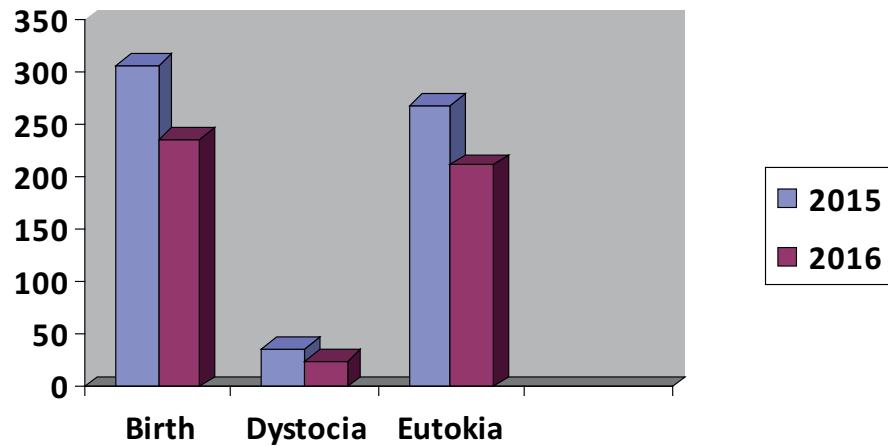


Figure 1: Total dystocia cases in beef cattle at Kunir Regency, Lumajang District – East Java, Indonesia.

### 4. Discussion

Dystocia are caused by both of the parent factor [12-13] and the fetal factor [14]. The parent factor can be caused by various circumstances, such as: breed, birth period, feed amount, exercise, reproductive disorder or trauma during pregnancy [16]. Fetal factors affecting the case of dystocia include fetal size, sex, fetal condition, and fetus location [14].

Analysis statistic with Chi Square about cattle breed can cause dystocia in beef cattle in Kunir regency, Lumajang distric is  $0.468 > 0.05$ , it can be concluded that  $H_0$  is accepted, and there is no significant relation. It suspect that dystocia can cause only from artificial insemination from semen Limousin to PO (Ongole Breed).

The effect of cattle age to dystocia in Kunir district of Lumajang Regency using chi-square statistical analysis is  $0.955 > 0.05$ . it can be concluded that  $H_0$  is accepted, which means no significant relationship. The parent’s age is related to mature sex of the parent. If the parent is still young cattle is likely for the occurrence of higher dystocia because he is still too young. This is because the young female cattle have small size pelvis cavity so that if forced to pregnant during childbirth will cause fracture [17]. Beside that, data about the effect of birth period on dystocia in Kunir sub district of Lumajang Regency using chi-square statistical analysis is  $0.898 > 0.05$ . it can be

concluded that  $H_0$  is accepted, which means no significant relationship. According to [18] states that as many as 30% to 60% of dystocia occur at first birth, 8% to 25% at second birth, and 2% to 8% at three brith or more. Dystocia is more common in cattle that first birth (prempipara) than cattle that have several times childbirth (pluripara). This is due to a strain of birth canal that has never been passed by the fetus [15].

Excercise is one of the factor to dystocia cases, data in Kunir sub district of Lumajang Regency using chi-square statistical analysis is  $0,470 > 0,05$ , it can be concluded that  $H_0$  is accepted and there is no significant relation. The excercise factor that affects dystocia is inertia uteri on the parent because lacks contraction during childbirth.

Data about the effect of feed to dystocia case in Kunir sub district of Lumajang Regency using chi-square statistical analysis is  $0.670 > 0.05$ , it can be concluded that  $H_0$  is accepted and also there is no significant relation. Excessive feeding during pregnancy can also cause dystocia, this is due to excessive accumulation of fat in the pelvic area. Giving less feed during pregnancy can also cause dystocia, because lacks energy for contraction [19].

Data about the influence of sex to dystocia case in Kunir sub-district of Lumajang Regency using chi-square statistical analysis is  $0,716 > 0,05$ , it can be concluded that  $H_0$  is accepted and also there is no significant relation. According to [20] the male fetus has a higher birth weight of 2.3 kg to 3.2 kg than the female fetus. The male fetus also experiences a longer birth period of about one to two days compared with the female fetus. According to [21] cited by [22] in beef cattle, the rate of growth and production efficiency is higher in males than females.

The last factor is fetal size, data of the effect fetal size on dystocia case in Kunir sub-district of Lumajang Regency using chi-square statistical analysis is  $0,604 > 0,05$ . It can be concluded that  $H_0$  is accepted, and there is no significant correlation.

## 5. Conclusion

The number of dystocia cases on beef cattle in Kunir sub-district, Lumajang District is 63 cases or 11.6% of 543 births. All factors that mentioned above are not significantly different, so other influential factors are semen of bull from larger breed, fetal position and inertia uteri can cause dystocia.

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