Incidence of periparturient complications and calving pattern in cross bred dairy cows of Jammu region

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Abstract

The present study was conducted with an aim to assess the incidence of peri-parturient reproductive disorders and to determine the seasonal calving pattern in cross bred cows of Jammu region. A total of 2638 calving records of cross bred dairy cows between 2010 – 2016 were screened retrospectively for peri-parturient reproductive disorders. The most common reproductive problems recorded in the present study were retained placenta (13.34%), still birth (6.36%), abortions (5.68%) and dystocia (2.19%). Incidence of retained placenta, still birth and dystocia were higher in winter season than in rainy and summer season. Whereas the incidence of abortion was higher in rainy season. Highest numbers of calving were recorded in winter season.

Keywords: Cattle, calving pattern, disorders, reproductive

1. Introduction

The peri-parturient period in cattle refers to the 2-3 weeks pre- and post-partum characterized by changes in endocrine status of the animal, to provide for lactogenesis and parturition (Kimura et al., 2006) [5]. During this period, immuno suppression commonly occurs and cows exhibit great susceptibility to a number of diseases. Peri-parturient disorders can dramatically affect reproductive efficiency of animals causing considerable economic loss to the dairy industry due to slower uterine involution, reduced reproductive rate, prolonged inter-conception period and calving interval, high cost of medication, drop in milk production, reduced calf-crop and early depreciation of potentially useful cows. Hence, a retrospective was planned to assess the incidence of peri-parturient reproductive disorders and determine seasonal calving pattern in cross bred dairy cattle of Jammu region.

2. Material and Methods

To assess the incidence of peri-parturient complications, a total of 2638 calving records maintained at Military dairy and others cattle farms of Jammu during the period from 2010 - 2016 were utilized for present study. The study animals were of different age group, parities and body condition scores and were regularly dewormed and vaccinated and were managed by semi-intensive production system.

3. Result

The year wise total number of calving, total normal calving, total number of male and female born with average birth weight has been presented in Table 1. The overall incidence of Dystocia, retention of placenta, abortions and stillbirth was 2.19%, 13.34%, 5.68% and 6.36% respectively. Higher incidence of Dystocia and R.O.P were reported in cows delivered male calves than female calves. (Table 2) Seasonal analysis revealed higher number of calving in winter (49.46%) and summer (27.21%) season than in rainy season (23.31%). Dystocia followed calving trend, being higher in winter and summer season than in rainy. The occurrence of retained placenta was higher in winter and rainy season than in summer (Table 3).
4. Discussion

The number of calves born in the present study was 2488. Out of this 1349 was male and the rest 1139 were female and the ratio (male: female) was 54:46. Our findings are in agreement with the findings of Tesfu et al. (2014) [12] who reported sex ratio of 52:48 in dairy farms subjected to artificial insemination. In present study, the overall incidence of retained placenta was higher (13.34%) than reported by Pande et al., 2009 [2] which also are in agreement with the findings of Erb et al., 1958 [3] who reported 56% cases of retained placenta associated with birth of male calves. Moreover, retained placenta in cattle is also associated with dystocia, abortion, short or long gestation and twinning (Bhattacharyyn et al., 2007) [2] which also are important predisposing factor for occurrence of RFM. The reported incidence of dystocia varies widely between 2-11% (Roberts, 1984). Our study reports incidence of 2.19% which is in agreement with the findings of Sekhar and Rajani (2014) [9] who reported 2.9% prevalence of dystocia among cross bred cows of Chittoor District of Andhara Pradesh. High incidence of dystocia was observed with male calves which might be attributable to their higher birth weight (Patil et al., 2014) [7]. The higher occurrence of dystocia in winter and summer season than in rainy season may be attributed to higher number of calvings occurring in these season.

The incidence of abortion (5.68%) recorded in this study is similar to the findings reported earlier by Shiferaw et al., 2003 [10] and Kassahun (2003) [4]. This finding was also similar with the findings of Sekhar and Rajani (2014) [9] who have reported prevalence of 6.7% in dairy farms and at farmers in Andhra Pradesh. The lower incidence of abortion may be attributed to the increasing practice of AI in the study area where the semen is collected from bulls free from brucellosis and also due to the effect of vaccination against brucellosis in female animals.

Incidence of still birth in the present study was estimated to be 6.36% which fairly agrees with 6% reported by Atashi, 2011 [1]. The incidence of still birth was higher in winter season than in summer and rainy season. Similar findings were reported by Silva del Rio et al., 2007 [11] who observe higher incidence of still birth in cold season compared to warmer season. Mayer et al., 2001 also reported calving season as a significant factor affecting the incidence of still birth parturition.

5. Conclusion

The outcome of this study strongly suggest that retention of placenta is one the most important peri-parturient reproductive problem in cattle herd. Greater awareness about seasonal predisposition of certain disorders may draw attention towards a proactive approach for better management.

6. References


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