Indian J. Anim. Prod. Mgmt. Vol. 30(3-4) 61-63 (2014)

KIDDING PATTERN OF ASSAM HILL GOAT

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Received : 03.06.2014 ***Accepted: 30.10.2014***

ABSTRACT

Data pertaining to 418 parturitions of Assam Hill Goat maintained at the adopted villages of AICRP on Goat Improvement, Goat Research Station, Burnihat were analysed to study the kidding pattern. The kidding was found to be distributed throughout the year with the highest kidding in the post-monsoon season (31.34%). Month-wise kidding records reveals that the highest and the lowest number of kidding was in the month of September (20.09%) and November (0.95%) respectively. The diurnal variation of spontaneous live births showed uni-model distribution with maximum kidding between 0600 to 1200 hours (56.46%) whereas the lowest incidence of kidding was recorded between 0.00 to 0600 hours. The percentage of single, twin and triplets were 60.76, 34.93 and 4.31 respectively. In the present study the percentage of male kid born was 50.50 per cent. The average birth weight of the male kids (1282.37gm) was higher than that of the female kids (1231.78 gm) at all types of birth (single, twins and triplets). The difference in birth weight between the sexes was non-significant.

In rural Assam, goat plays an important role in the farming system as evidenced by the higher annual growth rate (9.66 %) during the census year 2003-2007[8] in comparison to all India Annual Growth Rate per cent of 3.10.

Key words : Assam Hill Goat, kidding pattern, diurnal variation.

Assam Hill Goat, the native goat of Assam is known for its disease resistance, high prolificacy, high fertility, early sexual maturity and superior quality meat and skin. They are reared mostly in semi-intensive system and only the night shelter is provided with very minimum or no concentrate feed. Farmers have limited knowledge on scientific goat management that results in kid mortality and economic loss to the farmers. Moreover, the data pertaining to kidding pattern of Assam Hill Goat is scarce. Hence, the present study was planned to analyze and generate data on kidding pattern of Assam Hill Goat maintained in the adopted villages (field unit) of AICRP on Goat Improvement, Goat Research Station, Assam Agricultural University, Burnihat.

MATERIALS AND METHODS

The study was carried out for one year on Assam Hill Goats maintained at the adopted villages (field unit) of AICRP on Goat Improvement, Goat Research Station, Assam Agricultural University, Burnihat. The goats were kept under semi-intensive management system. The

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beneficiary farmers were trained on scientific management practices by the project and similar management practices were followed in all the units. The 418 parturitions of Assam Hill Goat were monitored to generate information on time, month and season of kidding, birth weight, sex of kid and type of birth.

Data recorded on kidding were distributed as per season *viz.* pre-monsoon (March to May), monsoon (June to August), post-monsoon (September to November) and winter (December to February) as per the earlier method[4].

Data on time of parturition were arranged in a sequence of six hours interval. First (12 mid night to 6 AM), second (6 AM to 12 noon), third (12 noon to 6 PM) and fourth (6 PM to 12 midnight).

Chi-square test was done to assess the differences in birth weight between the sexes.

RESULTS AND DISCUSSION

The data from 418 parturitions of Assam Hill Goat were collected and the kidding was found to be distributed throughout the year. The temporal distribution of kidding at four season reveals that the highest kidding (31.34%) was in the post-monsoon season (September to November), followed by pre-monsoon (28.23%) and winter (27.75%). The monsoon season (June to August) recorded lowest (12.68%) kidding. Month-wise kidding records indicates that the highest and the lowest number of kidding was in the month of September (20.09%) and November (0.95%) respectively. Similar observation of higher kidding rate (47.64%) was reported during July to September followed by 31.41 per cent during October to February in Black Bengal goat[6]. Some other workers[1] also observed two peak incidence (March to April and October to November) of kidding in Jamunapari goat.

The diurnal variation of spontaneous live births in 418 parturitions of Assam Hill Goat showed uni-model distribution with maximum kidding between 0600 to 1200 hours (56.46%), followed by 1201 to 1800 hours (32.30%). The lowest incidence of kidding was recorded between 0.00 to 0600 hours. The findings are in accordance with that observed in Bulgarian White Dairy goat[9] where peak numbers of does gave birth at around midday, while the lowest percentage was detected between 0004 to 0006 hours. Similar study carried out by earlier workers[5] reported that delivery in goats occurred mainly between 0900 and 1500 hours. The present findings suggest that the kidding was concentrated mainly during the daytime hours facilitating easy kidding management in the field unit.

In 418 parturitions, the percentage of single, twin and triplets born in Assam Hill Goat was found to be 60.76, 34.93 and 4.31 respectively. The highest number of single born kid might be due to the fact that 21.30 per cent does kidded in the present study were of first parity. However, detail study with more data will be required to establish the effect of parity on kid size. In the present study the percentage of male kid born was 50.50 per cent.

The average birth weight of the male kids (1282.37 ± 18.51 gm) was higher than that of the female kids (1231.78 ± 19.56 gm) at all types of birth (single, twins and triplets), but the differences in birth weight between the sexes was non-significant (calculated value of ÷2 was 1.35). Earlier works on Black Bengal goat[2, 6] revealed significantly higher ($P<0.05$) birth weight of male kid (1.24 ± 0.03 Kg) than female (1.19 ± 0.13 Kg). They also reported that the type of birth did not affect the birth weight of kids; however, the feeding level and parity has a significant effect on the birth weight. An investigation on Barbari goat[3] reveals higher birth weight in male (4.17%) than female kids though the difference was not significant. In contrary to the present study some workers[7] reported significantly ($P<0.05$) higher birth weight in Barbari male kids than female kids. The variations in birth weight in different studies might be due to variations in weather, plan of nutrition and farm management.

CONCLUSION

The present study showed that post-monsoon season evidenced highest kidding. As the kidding occurs mostly in the morning to noon period, the management strategy can be designed accordingly to take ultimate care and precautions during the time of kidding for optimal survivability of the new born. The average birth weight of the male kids was higher than the female kids at all types of birth but the difference between sexes, was not significant.

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