

Incidence of post partum anoestrus in buffaloes

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ABSTRACT

Study on prevalence of anoestrus in buffalo cows was carried out monthwise and seasonwise basis. Out of 237 cases of reproductive disorders, 81 (34.18%) were anoestrus. The prevalence of anoestrus in buffalo cows during different months and seasons ranged from 14.28 to 51.72% and 28.30 to 38.75%, respectively. The highest percentage (51.72%) was recorded during August while the lowest (14.28%) during June. The effect of month and season on prevalence of anoestrus was not significant.

Key words : Incidence, post partum anoestrus, buffalo

Prolonged anoestrus leads to longer intercalving period and reduction in calf crops. Among several reproductive disorders, anoestrus is the most common cause of infertility in bovine population as its incidence has been reported to be quite high. Previous reports on its incidence showed great variation from as low as 3% to as high as 41.40% (Kumar and Agrawal, 1986). Keeping in view the above observations from different agroclimatic zones of the country, the present study was undertaken to determine the prevalence of anoestrus cases in the region of Bihar plains.

Prevalence of anoestrus in buffaloes were recorded from outdoor clinic of Gynaecology department, Bihar Veterinary College, Patna from September, 1998 to August, 1999. The seasons were demarcated as per Sinha (1998) : Autumn : August, September and October; Winter : November, December and January; Spring : February, March and April; Summer : May, June and July. The anoestrus animals were subjected to detailed per rectum gynaecological examination to determine the ovarian and tubular condition. Anoestrus due to

pregnancy, retained or persistent C.L. associated with gross uterine pathology and due to sub-estrus were excluded. Animals on the basis of rectal palpation having smooth ovary without follicular or luteal structure were selected. Chi-square test was done (Snedecor and Cochran, 1967) to observe the difference between months and season.

The monthwise prevalence of anoestrus ranged from 14.28% to 51.72%. The maximum percentage (51.72%) as well as maximum number of cases (15) was recorded during August. The minimum percentage was recorded during June. The seasonwise prevalence ranged from 28.30% to 38.75%. Highest percentage was observed in Autumn (38.75%) followed by summer (37.73%), Winter (29.41%) and Spring (28.30%). Buffaloes being regular breeder exhibit seasonality in sexual cyclicity. During summer the symptoms of estrus in buffaloes are weak and such problem may be handled by providing better shelter management and nutrition (Roy *et al.*, 1968). During commencement of rainy season the prolactin concentration decreases with concurrent increase in FSH concentration in circulation that induce follicular growth, exhibition of behavioral estrus leading to ovulation (Galhotra *et al.*, 1985). The higher prevalence of estrus during Autumn and lower during summer in buffaloes under present study might be due to the fact that during summer the FSH level might be lower which increased during Autumn, stimulates

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Table 1. Monthwise prevalence of anoestrus in post-partum buffalo cows

Months	No. of cases	No. of animals in anoestrus	Over all % of anoestrus animals	χ^2 d.f. value
Sept., 98	24	8	33.33	11.76 ^{NS}
Oct., 98	27	8	29.63	
Nov., 98	17	5	29.41	
Dec., 98	16	5	31.25	
Jan., 99	18	5	27.78	
Feb., 99	25	6	24.00	
Mar., 99	16	4	25.00	
Apr., 99	12	5	41.67	
May 99	13	6	46.15	
June, 99	14	2	14.28	
July, 99	26	12	46.15	
Aug., 99	29	15	51.72	
Total	237	81	34.18	

^{NS} Non-Significant

follicular growth and resumption of estrus. The observation agrees with the reports of similar higher prevalence of anestrus in summer (Kumar *et al.*, 1991). The monthwise and seasonwise prevalence recorded as 34.18% was in close agreement with the findings of Singh *et al.* 1989 who recorded 27.56% and higher percentage of 73.84% (Kumar *et al.* 1991) have been previously reported. The present study revealed higher prevalence of anestrus in Autumn as compared to summer season in buffaloes.

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