

REPRODUCTIVE TRAITS OF SWAMP BUFFALOES OF MANIPUR*

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ABSTRACT

A survey was carried out to study reproductive parameters of swamp buffaloes of Manipur. Average age at first calving, gestation period, dry period, service period and inter-calving period were found to be 5.02 ± 0.15 years, 324.63 ± 1.22 , 291.30 ± 3.45 , 180.90 ± 0.64 and 449.12 ± 4.38 days respectively. Statistical analysis revealed non-significant effect of types (Hill type and Plain type) of buffaloes on all these reproductive parameters.

Key words : Swamp buffalo, Manipur, Reproductive parameters.

The buffaloes of Manipur are medium in structure, compact with strong legs, grey to grayish in colour with sickle shaped horns. The horns are broad at the base and corrugated in nature. The tail is long with a moderate switch. There are two distinct chevrolet white markings, one around the neck and the other at the brisket region known as '*kati*' in local dialect. A typical white to grayish white colour is observed from knee to coronet in majority of buffaloes. The neck is comparatively short. The forehead is almost flat and face is proportionately small compared to the body. The eyes are large and slightly bulging in male. The majority of the swamp buffaloes of Manipur are semi-wild in nature.

A survey was carried out to study certain reproductive characteristics of swamp buffaloes of Manipur and data were collected from the available

breeding records, personal observations and verbal communications with the individual owners of the two districts, viz. Ukhrul (hill) and Thoubal (plain) of Manipur covering a period of one year from April, 2009 to May, 2010.

Thoubal is a plain district in the heart of Manipur with a geographical area of 519 km², while Ukhrul is a hill district in the north eastern part of Manipur with a geographical area of 4,544 km². The reproductive parameters studied were age at first calving, gestation period, dry period, service period and intercalving period.

A total of 34 observations were recorded for this study. Out of total 34 observations, 12 and 22 were recorded from Ukhrul and Thoubal districts of Manipur respectively. The data were classified into 2 groups according to types of buffaloes available in Manipur, viz. the 'Hill Type' and the 'Plain Type'. The data were subjected to statistical analysis as per the standard method⁷

The overall mean age at first calving was recorded to be 5.02 ± 0.15 years. The mean age at first calving of Hill type buffaloes was recorded

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as 5.01 ± 0.15 years, while it was 5.02 ± 0.14 years in plain type. There was no significant difference in age at first calving between the two types of buffaloes. A worker² also found similar results in swamp buffaloes of Assam and in swamp buffaloes of North Eastern region of India respectively. But other workers^{5,3,1} found lower age at first calving in swamp buffaloes of Assam.

The overall mean gestation period was found to be 324.63 ± 1.22 days. The mean gestation period of Hill type buffaloes was found to be 325.38 ± 1.32 days, while it was 323.92 ± 1.19 days in plain type. There was no significant difference in gestation period between the two types of buffaloes. Similar findings were observed by other workers^{4,2} in swamp buffaloes of Assam and in swamp buffaloes of North Eastern region of India respectively. Another worker⁶ found longer gestation period in swamp buffaloes of Assam.

The overall mean dry period was found to be 291.30 ± 3.45 days. The mean dry period of Hill type buffaloes was found to be 289.28 ± 3.51 days, while it was 293.46 ± 3.41 days in plain type. There was no significant difference in dry period between the two types of buffaloes. Certain workers^{5,6,4} observed shorter day period in swamp buffaloes of Assam. Another worker⁵ also found significant effect of location on dry period in swamp buffaloes of Assam.

The overall mean service period was found to be 180.90 ± 0.64 days. The mean dry period of Hill type buffaloes was found to be 181.11 ± 0.69 days, while it was 180.72 ± 0.63 days in plain type. There was no significant difference in service period between the two types of buffaloes. A

worker² also found similar results in swamp buffaloes of North Eastern region of India. Few workers^{5,1} found longer service period while another worker⁴ found shorter service period in swamp buffaloes of Assam. Certain worker⁵ observed non significant effect of location on service period, while another worker⁶ observed highly significant effect of location on service period in swamp buffaloes of Assam.

The overall mean intercalving period was found to be 449.12 ± 4.38 days. The mean dry period of Hill type buffaloes was found to be 467.91 ± 5.16 days, while it was 431.76 ± 3.22 days in plain type. There was no significant difference in intercalving period between the two types of buffaloes. Similar intercalving period was also observed by a worker⁴ in swamp buffaloes of Assam. Longer intercalving period was reported by other workers^{5,2} in swamp buffaloes of Assam and in swamp buffaloes of North Eastern region of India respectively. Few workers^{6,4} reported non significant effect of location on intercalving period in swamp buffaloes of Assam.

The genetic improvement in buffalo population of Manipur is most important to meet the ever increasing demand of milk and draught power of the state. Prior to formulating a meaningful buffalo improvement policy for the state of Manipur, it is necessary to gather the live data on physical, productive and reproductive performances of this semi-domesticated buffalo of Manipur with housing system and availability of fodder round the year at field level. Such data will also generate conservation of this unique buffalo of Manipur.

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