

RESEARCH PAPER

## Studies on mortality pattern in buffalo calves

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### ABSTRACT

The studies on the mortality pattern of buffalo calves was conducted at the Dairy Unit, Department of Animal Husbandry and Dairy Science, College of Agriculture, Marathawada Agricultural University, Parbhani. The data on animals mortality were studied and tabulated according to breed, period of birth, season, sex, cause of mortality and age. The highest mortality was observed in period  $P_1$  (32.92 per cent), followed by  $P_2$  (30.63 per cent),  $P_3$  (22.14 per cent) and lowest overall mortality observed in period  $P_4$  (19.41 per cent). It was observed that there was a non-significant ( $P>0.01$ ) effect of period on mortality pattern in buffalo calves. The mortality percentage in Murrah and Surti buffalo calves were significant ( $P>0.01$ ) at different seasons. High mortality was found in the age group of 0-30 days which is the critical stage of life of the new born calves.

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Low mortality rate in calves born at a dairy farm is one of the indices of economic soundness of a dairy farm enterprise. The death of young calves despite causing financial loss to the farmer by way of loss of calves itself and reduced lactational yield of dam, deprives the farmer of prospective superior herd replacements. Mortality in buffalo calves is serious problem causing severe economic loss to the farmers.

Calf mortality can be reduced by proper management. In order to devise such a management system, it is important to study the factors responsible for high mortality in buffalo calves. Buffalo constitutes an integral part of livestock agriculture system in Asia. For over 5000 years, it is rich source of draft power, milk, meat and hides. The wide contribution of buffaloes in the dairy husbandry scenario has been due to adaptation and feeding habits of this species in very harsh climatic conditions of hot-humid and hot-dry weather.

Majority of these animals are reared under sub-optimal conditions due to low economic status of livestock owners, as a secondary source of income. Despite of constraint, India has now become the largest producer of milk in the world.

As Indian sub-continent is the home tract of world's best dairy buffalo breeds, country would have well defined buffalo breeds with standard qualities and specific physical characters that differentiate them unmistakably from other types. Murrah, Surti, Jaffrabadi, Mehsana, Bhadawari, Nagpuri and Pandharpuri are the important buffalo breeds, found in India. Amongst these breeds, Murrah and Surti are most efficient milk producers.

### MATERIALS AND METHODS

The Dairy Unit, Department of Animal Husbandry and Dairy Science, maintains two buffalo breeds namely, Murrah and Surti. The records of birth and death of Murrah and Surti breeds are maintained systematically. The data were collected from the registers maintained at the dairy unit. The data of total 271 animals mortality were made available for the study from the records. The data were tabulated according to the breed (Murrah and Surti), period of birth (Period  $P_1$  1985-1989; Period  $P_2$  1990-1994; Period  $P_3$  1995-1999; Period  $P_4$  2000-2004), season ( $S_1$  as Monsoon-June-September;  $S_2$  as Winter-October-January; snake bite, traumatic injury) and age *i.e.* six groups (A- Birth to 30 days of age; B – 31 to 90 days of age; C – 91 to 180 days of age; D – 181 to 365 days of age). The data covering period for 20 years *i.e.* from January 1985 to December 2004 was collected from mortality records. The data pertaining to mortality and factors affecting mortality were analyzed by Chi-square test (Fedrer, 1967).

### RESULTS AND DISCUSSION

From the results obtained in Table 1, it is revealed that the overall mortality pattern at different periods was 32.92, 30.63, 22.14, 19.41 per cent in period  $P_1$ ,  $P_2$ ,  $P_3$ ,  $P_4$ , respectively. The overall mortality in buffalo calves was 26.28 per cent. It was higher in murrah (16.07 per cent) as compared to Surti (10.21 per cent). It was observed that there was a non-significant ( $P>0.01$ ) effect of period on mortality pattern in buffalo calves.

In Murrah calves highest mortality was observed in