International Journal of Veterinary Sciences and Animal Husbandry

**ISSN:** 2456-2912
VET 2024; SP-9(3): 227-229

www.veterinarypaper.com
Received: 23-02-2024
Accepted: 29-03-2024

**V Boopathi**
Assistant Professor,
Livestock Farm Complex,
Veterinary College and Research Institute, Veterinary and Animal Sciences University (TANUVAS),
Chennai, Namakkal, Tamil Nadu, India

**V Sasikala**
Assistant Professor,
Department of Veterinary and Animal Husbandry Extension Education, Veterinary College and Research Institute, Veterinary and Animal Sciences University (TANUVAS), Orathanadu,
Chennai, Tamil Nadu, India

**Corresponding Author:**
**V Boopathi**
Assistant Professor,
Livestock Farm Complex,
Veterinary College and Research Institute, Veterinary and Animal Sciences University (TANUVAS),
Chennai, Namakkal, Tamil Nadu, India

# Buffalo calf health care management practices followed by the farmers in Namakkal districts of Tamil Nadu

**V Boopathi and V Sasikala**

**DOI:** https://doi.org/10.22271/veterinary.2024.v9.i3Sd.1461

**Abstract**
A field survey was conducted to assess the buffalo calf health care management practices followed by farmers in Namakkal District, Tamil Nadu. A random sample of 120 farmers participated in the study. All the farmers reported cleaning mucus from the nostrils of new-born calves and feeding colostrum within the first two hours of birth. The majority of farmers (98%) assisted weak calves in sucking colostrum, and 20% practiced regular deworming. However, the survey also highlighted constraints related to calf health care, noting that the majority of farmers did not provide any special feeding to buffalo calves.

**Keywords:** Buffalo calf, health care, management, Namakkal

## Introduction
The profitability of a dairy production system relies heavily on effective herd management. Calves are crucial for the development of the dairy sector, as the future dairy herd depends on the successful raising of young calves. Proper calf rearing is essential for preserving and maintaining high-quality germplasm, as these calves represent future replacements. However, heavy buffalo calf mortality, particularly in the first few months post-natal, has been reported Shivarudrappa *et al*. (2013) [12]. Calf mortality is influenced by various factors including types of housing, feeding management practices, weather conditions, and parasitic infestations. External and internal parasitic infestations, as well as bacterial infections causing septicaemia and enteritis, are significant contributors to calf mortality Blood *et al*., (1994) [1]. The management style of farmers greatly affects calf mortality, with studies suggesting that over half of these deaths can be prevented with proper management practices Raboisson *et al*. (2013) [9]. The period from birth to weaning is the most critical phase in a dairy calf rearing system, due to its direct costs and lack of immediate financial return for the farmer. Additionally, poor conditions of calves in village dairies often result from a lack of awareness about scientific calf management practices among farmers. In light of these challenges, the present study was conducted to identify areas requiring intervention to improve health care management practices for buffalo calf rearing. Enhancing these practices is essential for sustainable dairy development in the region.

## Materials and Methods
The Namakkal District of Tamil Nadu, encompassing a total area of 55.24 sq.km, is divided into eight taluks. A field survey was conducted in the rural areas of six selected revenue taluks within this district. Data were collected from a random sample of 120 buffalo farmers across these taluks, each of whom owned at least one or two buffaloes and their followers. The sample size of 120 was evenly distributed among the six selected taluks. The selected buffalo farmers were interviewed using a pre-tested, structured schedule to gather information on their calf-rearing management practices. The collected data were then tabulated and analysed using standard statistical tools, such as frequency and percentages, to derive meaningful inferences.

## Results and Discussion
The buffalo calf health care management practices followed by farmers in the study area are presented in Table 1.

The results revealed that 98% of farmers attend to calving and take care of the calves after parturition. This finding aligns with the observations of Prajapati *et al*. (2017) [8], where all farmers in South Gujarat attended to calving and cared for calves post-calving.

**Clearing of mucus from nostrils of new-born Calves**

It was observed that farmers in the study area practiced clearing mucus from the nostrils of new-born calves at the time of birth (Table 1). These findings are consistent with those of Godara *et al*. (2018) [2] and Prasanthi *et al*. (2023) [8], who reported that all buffalo farmers in the rural areas of Western Haryana and the Yanam region of Pondicherry practiced clearing mucus from new-born calves immediately after birth.

**Care of naval cord**

From the study, it was observed that all buffalo farmers prevented navel cord infection by providing a clean and dry environment until the umbilical cord dried and atrophied. Additionally, a clean cotton cloth was draped around the calf's abdomen. However, the practice of ligating the umbilical cord and applying antiseptic solution to the cut end was not observed in the region. This finding is similar to the observations of Godara *et al*. (2018) [2] and Prasanthi *et al*. (2023) [8], who reported that none of the farmers in Western Haryana and the Yanam region of Pondicherry practiced ligation or applied antiseptic solutions to the navel cords of calves after birth.

**Feeding colostrum**

The study revealed that 83% of the farmers fed colostrum to calves within two hours of birth and assisted weak calves in sucking colostrum from the dam. Providing colostrum within the first hour of birth is crucial as the absorption of gamma globulins decreases rapidly over time Weaver *et al*. (2000) [13]. These findings are similar to those of Godara *et al*. (2018) [2] in rural areas of Western Haryana and Prasanthi *et al*. (2023) [8] in the Yanam region of Pondicherry, where the majority of farmers fed colostrum to calves within the first three hours of birth and assisted weak calves. However, the results of the present study contradict the findings of Kumar *et al*. (2013) [5], who observed that only 11.67% of farmers fed colostrum to calves within the first three hours of birth.

**Milk feeding**

All the buffalo calves were fed milk by direct suckling without considering their actual body weight requirements. The buffalo farmers used the calves primarily for milk let-down, allowing them to suckle milk before and after milking. It is emphasized that calves must receive sufficient milk during the first three months, or at least be fed adequately over a period of 4-5 weeks (Sharma and Mishra, 1987) [11]. At most farms, buffalo calves died due to malnutrition and starvation.

**Calf Stater**

It was noted that none of the farmers supplied calf starter to the calves, mirroring the findings of Maousaei *et al*. (2013) [6]. This could stem from a lack of awareness among buffalo farmers regarding the nutritional needs of growing calves, which cannot be adequately met solely through milk feeding. All buffalo calves were exclusively fed milk through direct suckling, without consideration of their specific requirements based on body weight.

**Table 1:** Calf health care management practices in Namakkal district

| Calf management practices | Frequency (N=120) | Per cent |
|---|---|---|
| Attended calving and took care calves after calving | Yes (118) | 98.33 |
| | No (2) | 1.66 |
| Clearing mucous membrane from nostrils | Yes (120) | 100.00 |
| | No (0) | 0 |
| Assisting weak calf to fed colostrum | Yes (115) | 95.83 |
| | No (5) | 4.16 |
| Time of feeding colostrum | | |
| Within 1 hour | 60 | 50.00 |
| Within 1-2 hours | 40 | 33.33 |
| After releasing of placenta | 20 | 16.66 |
| Rate of feeding colostrum | | |
| $1/10^{th}$ of body weight | 8 | 6.66 |
| 1-2 litres per day | 102 | 85.00 |
| 2-3 litres per day | 10 | 8.33 |
| Feeding of milk to the calf up to | | |
| Age of three months | 4 | 3.33 |
| Age of six months | 10 | 8.33 |
| Till lactation ceases | 106 | 88.33 |
| Rate of feeding milk to the calf | | |
| Leave one full teat | 12 | 10.00 |
| Leave before and after milking | 108 | 90.00 |
| Calf starter supplemented | Yes (0) | 0 |
| | No (120) | 100.00 |
| Weaning practiced | Yes (0) | 0 |
| | No (120) | 100 |
| Deworming of buffalo calves | | |
| Yes | 9 | 7.50 |
| No | 111 | 92.5 |
| Vaccination of buffalo calf | | |
| Yes | 115 | 95.83 |
| No | 5 | 4.16 |

**Deworming**

A significant cause of mortality on rural dairy farms was attributed to parasitic infestations in buffalo calves, leading to their health deterioration and frequent deaths Sharma and Mishra. (1987) [11]. This study highlights that even individual buffalo farmers did not practice deworming of buffalo calves within 15-20 days after birth. The observation of neglecting deworming in calves aligns with the findings of Kumar *et al*. (2013) [5]. However, the present study's observations contradict the findings of Kour *et al*. (2019) [4] in Jammu and Prasanthi *et al*. (2023) [8] in Pondicherry.

**Weaning of calf**

In the study area, none of the farmers adhered to weaning practices until the calves reached three months of age. Such practices contribute to increased calving intervals in buffaloes. To address this issue, it is recommended to implement weaning protocols after the calves reach three months of age and under suitable conditions. These results are consistent with the findings of Khadda *et al*. (2010) [3] in Gujarat.

**Vaccination of Calf**

Regarding prophylactic measures, nearly all respondents (95.28%) opted for vaccinating their buffalo calves against prevalent contagious diseases in the study area, such as Foot and Mouth Disease and Hemorrhagic Septicemia. This indicates a commendably high level of awareness among buffalo farmers regarding animal protection through vaccination. These findings closely align with those reported by Sabapara *et al*. (2010) [10].

**Conclusions**

In Namakkal district of Tamil Nadu, nearly all buffalo farmers were observed to be feeding colostrum to new-born calves, taking preventive measures against umbilical cord infections, clearing mucus from nostrils, and assisting weak calves in feeding colostrum. However, some challenges such as adapting deworming schedules and introducing calf starter and other management activities were perceived by buffalo farmers. Addressing these constraints could significantly enhance buffalo calf healthcare management, leading to improved economic returns.

**References**


1. Blood DC, Radostitis OM, Gay CC, Arundel JH, Ikede BO, Mekenzie RABC. Veterinary Medicinese. Eighth. Ed. ELBS, London; c1994.
2. Godara V, Gulati HK, Singh N, Kumar S, Robin. Buffalo feeding management practices adopted in rural areas of western Haryana. Forage Research. 2018;43(4):322-326.
3. Khadda BS, Lata K, Jadav JK, Kalash P, Kumar R. Study on calves' management practices in tribal and non-tribal areas of Panchmahals district of Gujarat. Journal of Progressive Agriculture. 2010;1(1):84-86.
4. Kour S, Khan A, Brahma B, Jeelani R, Khursheed I, Dua S. A study on buffalo management practices followed by Gujjar tribe of Jammu. Journal of Pharmacognosy and Phytochemistry. 2019;8(3):218-221.
5. Kumar R, Singh DK, Somvanshi SPS, Singh HP, Chauhan R. Buffalo calves health and management practices in urban dairy farms. Indian Journal of Dairy Science. 2013;66(6):520-526.
6. Maousami Singh BP, Kumar R, Kumar V, Dohare A. Analysis of buffalo calf management practices followed by buffalo owners. Journal of Animal Science Advances. 2013;3(3):129-133.
7. Prajapati VS, Singh RR, Jadav NB, Sharama PS, Undhad SV. Calf management practices in dairy animals of rural and urban area under milk shed of south Gujarat. Research Journal of Animal Husbandry and Dairy Science. 2017;8(2):99-102.
8. Prasanthi K, Mallikarjun R, Sreekumar D, Rajaganapathy V, Ganesan R, Natchimuthu K. Buffalo calf management and health care practices followed by farmers in Yanam Region of Puducherry. The Indian Veterinary Journal. 2023;100(12):29-32.
9. Raboisson D, Delor F, Cahuzac E, Gendre C, Sans P, Allaire G. Perinatal, neonatal and rearing period mortality of dairy calves and replacement heifers in France. Journal of Dairy Science. 2013;96:2913-24.
10. Sabapara GP, Desai PM, Ranjeet Singh R, Kharadi VB. Breeding and health care management status of dairy animals in the tribal area of south Gujarat. Indian Journal of Animal Sciences. 2010;80(11):1148-1151.
11. Sharma MC, Mishra RR. Livestock health and management. Khanna Publishers, New Delhi, India; c1987.
12. Shivarudrappa B, Reddy SG, Sahare J, Bhagat RL. Assessment of Buffalo Calves Mortality in West Godavari District of Andhra Pradesh, India. Key Research Journal of Agriculture. 2013;1(1):14-49.
13. Weaver DM, Tyler JW, VanMetre DC, Hostetler DE, Barrington GM. Passive transfer of colostral immunoglobulins in calves. Journal of veterinary internal medicine. 2000;14(6):569-577.


**How to Cite This Article**

Boopathi V, Sasikala V. Buffalo calf health care management practices followed by the farmers in Namakkal districts of Tamil Nadu. International Journal of Veterinary Sciences and Animal Husbandry. 2024;SP-9(3):227-229.