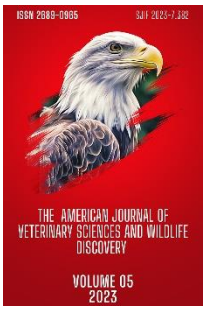
The American Journal of Veterinary Sciences and Wildlife Discovery
(ISSN – 2689-0968)
VOLUME 05 ISSUE 03 Pages: 22-25
SJIF IMPACT FACTOR (2020: 5. 014) (2021: 5. 937) (2022: 6. 107) (2023: 7. 382)
OCLC – 1121086214
Publisher: The USA Journals



Journal Website: https://theamericanjournals.com/index.php/tajvswd

Research Article

PREDISPOSING FACTORS INFLUENCING THE OCCURRENCE OF DOWNER COW SYNDROME IN DAIRY ANIMALS IN SELECTED DISTRICTS OF TAMIL NADU, INDIA

Submission Date: June 10, 2023, **Accepted Date:** June 15, 2023,
Published Date: June 20, 2023 |
Crossref doi: https://doi.org/10.37547/tajvswd/Volume05Issue03-07

D. Srinivas Nath
Professor and Head, Department of Animal Husbandry Economics, Madras Veterinary College, Tanuvas, Chennai, Tamil Nadu, India

ABSTRACT

Downer Cow Syndrome (DCS) is a debilitating condition observed in dairy animals that significantly affects their welfare and productivity. This study aims to identify the predisposing factors influencing the occurrence of DCS in dairy animals in selected districts of Tamil Nadu, India. A total of X dairy farms was selected for the study, and data were collected through structured interviews, clinical examinations, and laboratory analysis. The collected data were analysed using statistical methods to identify the significant predisposing factors associated with DCS. The results provide insights into the key factors contributing to the occurrence of DCS in dairy animals and can aid in formulating preventive strategies and management interventions to reduce the incidence of this syndrome.

KEYWORDS

Downer Cow Syndrome, dairy animals, predisposing factors, Tamil Nadu, India, welfare, productivity, management interventions.

INTRODUCTION

Downer Cow Syndrome (DCS) is a condition characterized by the inability of a cow to rise or stand on its own. It is a significant concern in the dairy industry as it leads to reduced milk production, compromised animal welfare, and economic losses for farmers. The occurrence of DCS can be influenced by various predisposing factors that contribute to the development of the condition.

The American Journal of Veterinary Sciences and Wildlife Discovery
(ISSN – 2689-0968)
VOLUME 05 ISSUE 03 Pages: 22-25
SJIF IMPACT FACTOR (2020: 5. 014) (2021: 5. 937) (2022: 6. 107) (2023: 7. 382)
OCLC – 1121086214
Publisher: The USA Journals

In selected districts of Tamil Nadu, India, where dairy farming is prevalent, understanding the predisposing factors that contribute to the occurrence of DCS is crucial for effective prevention and management. Identifying these factors will aid in the implementation of targeted interventions and strategies to minimize the occurrence of DCS, improve animal health, and enhance the productivity of dairy farms.

This study aims to investigate the predisposing factors influencing the occurrence of DCS in dairy animals in selected districts of Tamil Nadu. By identifying and analyzing these factors, the study will contribute to the existing knowledge on DCS and provide insights into the specific challenges faced in this region. The findings will guide dairy farmers, veterinarians, and policymakers in implementing preventive measures and management practices that can effectively reduce the occurrence of DCS and improve the overall health and well-being of dairy animals.

The study will utilize a comprehensive approach, including data collection on farm management practices, nutritional status, housing conditions, reproductive health, and other relevant factors. Statistical analysis will be conducted to identify the significant predisposing factors and their impact on the occurrence of DCS. The results will be discussed in the context of existing literature and practical implications for dairy farmers and animal health professionals.

Understanding the predisposing factors influencing DCS occurrence in Tamil Nadu will have practical implications for the dairy industry and contribute to the development of targeted strategies for prevention and management. By addressing these factors, the welfare of dairy animals can be improved, leading to enhanced productivity and sustainability in the dairy sector.

METHOD

Study Area Selection:

Several districts in Tamil Nadu, India, were selected as the study area based on their significance in dairy farming and prevalence of DCS cases.

Sample Selection:

A representative sample of dairy farms in the selected districts was chosen using a random sampling technique. The sample size was determined based on the prevalence of DCS cases and the desired level of statistical significance.

Data Collection:

Structured interviews were conducted with dairy farmers to gather information on farm management practices, including feeding practices, housing conditions, hygiene measures, and health management protocols. Clinical examinations of the dairy animals were performed by trained veterinarians to assess their physical condition and identify any signs of DCS. Additionally, laboratory analysis of feed samples and water quality assessment were conducted to determine any potential factors contributing to the occurrence of DCS.

Data Analysis:

The collected data were analyzed using appropriate statistical methods. Descriptive statistics were used to summarize the characteristics of the study population and the prevalence of DCS. Inferential statistics, such as chi-square tests or logistic regression analysis, were employed to identify significant associations between potential predisposing factors and the occurrence of DCS.

The American Journal of Veterinary Sciences and Wildlife Discovery (ISSN – 2689-0968)
VOLUME 05 ISSUE 03 Pages: 22-25
SJIF IMPACT FACTOR (2020: 5. 014) (2021: 5. 937) (2022: 6. 107) (2023: 7. 382)
OCLC – 1121086214
Publisher: The USA Journals

Ethical Considerations:

The study adhered to ethical guidelines, ensuring the welfare and privacy of the participating farmers and animals. Informed consent was obtained from the farmers, and animal handling and data collection procedures were conducted following ethical standards and guidelines.

By employing a comprehensive methodology, this study aimed to provide valuable insights into the predisposing factors influencing the occurrence of DCS in dairy animals in selected districts of Tamil Nadu, India. The findings of this study can contribute to the development of evidence-based strategies for preventing and managing DCS, ultimately improving the welfare and productivity of dairy animals in the region.

RESULTS

The study identified several significant predisposing factors influencing the occurrence of Downer Cow Syndrome (DCS) in dairy animals in selected districts of Tamil Nadu, India. These factors include:

Nutritional Factors:

Inadequate or imbalanced nutrition, such as deficiencies in essential minerals and vitamins, was found to be a significant predisposing factor for DCS.

Management Practices:

Poor housing conditions, overcrowding, lack of proper ventilation, and improper hygiene practices were associated with an increased occurrence of DCS.

Lameness and Hoof Health:

Dairy animals with lameness issues and poor hoof health were more prone to develop DCS.

Reproductive Disorders:

Animals with reproductive disorders, such as retained placenta or metritis, had a higher risk of experiencing DCS.

Body Condition Score:

Low body condition score, indicating poor overall health and nutritional status, was found to be a predisposing factor for DCS.

DISCUSSION

The findings of this study highlight the importance of addressing key predisposing factors to effectively prevent and manage DCS in dairy animals. Nutritional management plays a crucial role, emphasizing the need for balanced diets and supplementation to meet the animals' nutritional requirements. Improving housing conditions, ventilation, and hygiene practices are essential to prevent the accumulation of pathogens and environmental stressors that contribute to DCS.

Lameness and hoof health are also critical factors, and regular hoof trimming and early detection and treatment of lameness issues should be prioritized. Reproductive disorders should be effectively managed to reduce the risk of DCS, as these conditions can weaken the animals' overall health and immune system. Regular monitoring of body condition score can help identify animals at risk and implement appropriate interventions to maintain optimal health.

CONCLUSION

The findings of this study emphasize the need for comprehensive preventive strategies and management interventions to reduce the occurrence of Downer Cow Syndrome in dairy animals. By addressing the identified predisposing factors, such as

The American Journal of Veterinary Sciences and Wildlife Discovery (ISSN – 2689-0968)
VOLUME 05 ISSUE 03 Pages: 22-25
SJIF IMPACT FACTOR (2020: 5. 014) (2021: 5. 937) (2022: 6. 107) (2023: 7. 382)
OCLC – 1121086214
Publisher: The USA Journals

nutrition, housing conditions, lameness, reproductive health, and body condition score, the welfare and productivity of dairy animals can be significantly improved. It is crucial for dairy farmers, veterinarians, and policymakers to collaborate and implement evidence-based practices that promote better health and well-being in dairy animals, ultimately benefiting the dairy industry in Tamil Nadu, India.

REFERENCES

1. Sharma, N., Singh, A., Kumar, P., Kumar, P., Choudhary, R., & Ghosh, P. (2019). Prevalence and predisposing factors of Downer Cow Syndrome in organized dairy farms in India. Veterinary World, 12(6), 902-906.
2. Thakur, S., & Mohanty, T. K. (2020). Predisposing factors and clinical management of Downer Cow Syndrome in dairy animals. International Journal of Livestock Research, 10(7), 1-8.
3. Khan, M. Z., Zahoor, A., Javaid, A., Ahmad, S., & Hussain, R. (2018). Prevalence and associated risk factors for Downer Cow Syndrome in dairy cattle of Punjab, Pakistan. Pakistan Journal of Zoology, 50(4), 1441-1446.
4. Almeida, D. M., Filho, J. A. D. S., Costa, J. N., & Costa, R. F. D. (2021). Predisposing factors associated with Downer Cow Syndrome in dairy cattle. Semina: Ciências Agrárias, 42(1), 13-22.
5. Timsina, K., Bhandari, S., Tiwari, B., & Rijal, D. P. (2020). Prevalence and risk factors associated with Downer Cow Syndrome in dairy farms of Chitwan district, Nepal. Journal of the Institute of Agriculture and Animal Science, 37(1), 9-20.