

# COMPREHENSIVE MANAGEMENT STRATEGIES FOR DAIRY HERD HEALTH

**Vishakha Uttam**

ICAR-National Dairy Research Institute, Karnal, Haryana-132001, India

Corresponding author e-mail: [vishakhauttam13@gmail.com](mailto:vishakhauttam13@gmail.com)

## ABSTRACT

Managing dairy herd health involves various aspects such as housing management, observation of animals, biosecurity, nutrition, hygiene, disease prevention, and parasitic infestation control. Effective housing ensures space, ventilation, cleanliness, and comfort. Regular observation monitors behaviour, body condition, and health status. Hygienic practices include daily cleaning to prevent disease. New animal acquisition requires adherence to vaccination schedules. Disease management entails biosecurity, sanitation, vaccination, and surveillance. Tick and fly control and parasitic infestation management are crucial. Biosecurity aims to prevent disease introduction and transmission. Implementing these strategies maintains herd health, minimizes disease risk, and enhances productivity.

**Keywords:** Dairy herd health, disease prevention, biosecurity measures

## I. INTRODUCTION

Managing the health of a dairy herd is crucial to guaranteeing the best possible care and welfare for the farm's dairy animals while minimizing productivity losses due to illness and inadequate management. Livestock health is commonly addressed concerning the entire herd, yet the well-being of each individual animal on the farm holds equal significance. This entails regular, daily monitoring of each animal. Herd health management serves as a proactive approach aimed at maintaining the herd's overall health and preventing diseases. It encompasses a thorough system of husbandry management, comprising:

- Proper housing Management
- General observations of animals
- Biosecurity
- Proper nutrition
- Hygienic practices
- Disease prevention by timely vaccination
- Tick and fly borne disease management
- Management of parasitic infestation
- Buying and induction of a new animal
- Mastitis control

## II. Effective housing management

This aims at maintaining comfort to animals in farm. It should have:

- Proper space for individual animal
- Proper sunlight
- Adequate ventilation
- Dry and clean sheds
- Reducing stress during summers

## III. General observations of animals

Monitoring specific parameters allows us to evaluate the health condition of animals within the herd.

- Behaviour
- Attitude
- Body Condition
- Appearance

## IV. HYGIENIC PRACTICES

Daily physical cleaning should involve the removal of urine, faecal matter, and organic debris from both the animals' bodies and their surroundings. Consistent cleaning of animals and their living environments not only prevents various diseases but also mitigates unpleasant odours in the shelters and surroundings.

## V. BUYING AND INDUCTION OF A NEW ANIMAL

Acquiring newly purchased animals poses a significant risk of introducing infections and potentially bringing new diseases into the herd. Procedure to adhere to:

- Procurement of animals from disease-free batches
- Isolation period of at least three weeks required
- Attend to the newly acquired animals only after caring for the existing herd.
- Proper vaccination schedule

In our country, vaccines are accessible for the majority of infectious diseases, and timely vaccination in a dairy herd can effectively manage diseases. Important considerations include ensuring the animal's good health, maintaining the cold chain for vaccines, and deworming the animals 2-3 weeks before vaccination to enhance immune response.

## VI. BACTERIAL AND VIRAL DISEASE MANAGEMENT

Managing bacterial and viral infections in a dairy herd necessitates a comprehensive strategy to prevent and manage disease transmission. This includes implementing stringent biosecurity measures to limit exposure, following proper sanitation and hygiene procedures, and ensuring timely vaccination of animals against prevalent pathogens. Regular surveillance and monitoring for early disease detection, coupled with immediate treatment and isolation of affected animals, are vital. Additionally, maintaining optimal nutrition, minimizing stress, and providing suitable housing conditions help bolster the herd's immune response to bacterial and viral infections. Collaborating with veterinarians and adhering to recommended management practices are pivotal in safeguarding the health and productivity of the dairy herd.

## VII. TICK AND FLY BORNE DISEASE MANAGEMENT

Tick infestation poses a significant challenge in dairy herds, causing discomfort to the animals and resulting in blood loss,

leading to decreased productivity and health issues. Additionally, ticks can transmit diseases that affect blood cells. Therefore, it is essential to promptly prevent and treat tick infestations.

## VIII. CONTROL MEASURES

**Ticks:** Regularly applying acaricide is necessary to control tick infestation. Ensure all cracks and crevices in the farm shed are treated with a stronger concentration of acaricides. Newly purchased animals must be thoroughly treated to remove ticks before introducing them to the rest of the herd.

**Flies:** Ensure timely disposal of manure and urine. Prevent any drainage stagnation. Use raw leaves, preferably neem leaves, for smoking the shed. Employ fly repellents in appropriate concentrations.

## IX. MANAGEMENT OF PARASITIC INFESTATION

Internal parasites deprive the animal of essential nutrients by feeding on tissue fluids or blood. Infestation with these parasites results in stunted growth, diarrhoea, delayed development, weakness, heightened vulnerability to infection, diminished response to vaccination, and in severe instances, potential fatality.

## X. SOME PARASITIC CONTROL MEASURES

Implement an effective deworming regimen for the herd. Provide the initial deworming dose to young animals aged 7-10 days, repeating monthly until they reach 6 months of age. Subsequently, administer dewormers to all animals aged over 6 months twice annually: once at the onset and again at the conclusion of the rainy season.

Pregnant animals should undergo deworming twice: the first dose should be administered near their calving time, followed by a second dose around 6-7 weeks after calving. To prevent drug resistance, refrain from administering the same drug repeatedly.

## XI. BIOSECURITY

Recognizing the significant impacts of infectious diseases, prioritizing the establishment and execution of biosecurity measures is crucial for the management of a dairy herd. It minimizes the risk of infectious diseases being introduced to the farm by individuals, animals, machinery, or vehicles. Consider the geographical location, soil composition, housing infrastructure, livestock, human personnel, and visitors, as well as transportation methods. Identify the prevalent infectious diseases within the herd. Identify potential infectious diseases not yet present but posing a threat. Conduct diagnostic assessments within the herd to assess the risk level for the transmission of specific disease pathogens. Develop and implement a biosecurity program accordingly.

### **XIII. REFERENCES**

- Hall, J., & Wapenaar, W. (2012). Opinions and practices of veterinarians and dairy farmers towards herd health management in the UK. *Veterinary record*, 170(17), 441-441.
- Pothmann, H., Nechanitzky, K., Sturmlechner, F., & Drillich, M. (2014). Consultancy to dairy farmers relating to animal health and herd health management on small-and medium-sized farms. *Journal of dairy science*, 97(2), 851-860.
- Von Keyserlingk, M. A. G., Rushen, J., de Passillé, A. M., & Weary, D. M. (2009). Invited review: The welfare of dairy cattle—Key concepts and the role of science. *Journal of dairy science*, 92(9), 4101-4111.

### **XII. CONCLUSION**

Effective management of dairy herd health is essential for ensuring optimal productivity and animal welfare. By implementing comprehensive strategies such as proper housing, observation, hygiene, disease prevention, and biosecurity measures, farmers can minimize disease risks and maintain the overall health of their herd. Regular monitoring, timely vaccination, and proper parasite control are vital components of successful herd health management. By prioritizing these practices, farmers can mitigate the impact of diseases, enhance productivity, and promote the well-being of their dairy animals.

