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Cold Wave and Livestock Health: Rising Diseases Push Farmers into Distress

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Introduction

The ongoing cold wave has emerged as a serious threat to livestock health, turning winter into a season of worry for farmers. Sudden and prolonged drops in temperature disturb normal animal physiology, increase stress, and weaken immune defenses, making animals more prone to disease outbreaks. According to Collier and colleagues (2023), exposure to cold stress significantly reduces immunity and overall productivity in livestock during prolonged winter spells.

Why Cold Weather Makes Animals Sick

Cold stress forces animals to use extra energy to maintain normal body temperature. When this increased energy demand is not met due to poor nutrition or inadequate housing, immunity declines rapidly. Sejian et al. (2022) explained that cold stress alters endocrine balance and metabolic pathways, while Zhao and co-workers (2021) reported increased oxidative stress and immune suppression in animals exposed to low temperatures.

Respiratory Diseases on the Rise

Respiratory illnesses such as pneumonia, coughing, nasal discharge, fever, and labored breathing are commonly reported during winter, especially in calves, young stock, and older animals. Das and associates (2021) observed a clear rise in respiratory infections during cold and damp conditions. Similarly, Collier et al. (2023) highlighted that cold air damages respiratory defense mechanisms, allowing pathogens to establish infections easily.

Digestive Disorders and Nutritional Stress

Winter conditions also contribute to digestive problems like diarrhea, indigestion, bloat, and constipation. Reduced water intake and poor-quality fodder disturb rumen function. Kumar and colleagues (2023) emphasized that nutritional stress during winter weakens digestive efficiency and increases disease susceptibility, particularly in calves and high-producing dairy animals. Sejian et al. (2022) also linked winter nutritional imbalance with reduced productivity.

Skin, Foot, and Parasitic Problems

Cold and wet environments favor skin infections, fungal diseases, and foot disorders such as hoof cracks and foot rot. External parasites like lice and mites become more common in overcrowded sheds during winter. According to Zhao et al. (2021), immune suppression caused by cold stress allows parasitic infestations to intensify, leading to weight loss and poor body condition.

Housing Conditions: A Major Risk Factor

Poor housing significantly increases the impact of cold waves on livestock. Animals exposed to cold winds, rain, and fog experience severe thermal stress. Lacetera (2022) emphasized that inadequate housing during climate extremes directly compromises animal welfare and health. Collier et al. (2023) also stressed that dry bedding and protection from wind are critical to reducing cold-related stress.

Economic Impact on Farmers

Cold stress and disease outbreaks directly affect farmers' income. Reduced milk production, increased veterinary expenses, and animal losses place a heavy financial burden on livestock owners. Sejian et al. (2022) reported that animals under cold stress divert more energy toward maintaining body temperature rather than milk production, while Kumar et al. (2023) linked winter stress with reduced farm profitability.

Preventive Measures for Winter Management

Most winter-related diseases are preventable through simple management practices. Das and associates (2021) demonstrated that improved winter housing, better hygiene, and timely veterinary care significantly reduce disease incidence. Protection from cold drafts and provision of dry bedding remain among the most effective preventive measures.

Importance of Nutrition and Clean Water

Providing a balanced and energy-rich diet is essential during winter. Collier et al. (2023) highlighted the role of increased dietary energy and mineral supplementation in

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helping animals cope with cold stress. Zhao and co-workers (2021) also emphasized that adequate nutrition supports immune function under stressful environmental conditions.

Role of Vaccination and Timely Treatment

Regular vaccination, deworming, and early veterinary intervention play a crucial role in preventing winter disease outbreaks. Lacetera (2022) noted that preventive healthcare becomes even more important as climate variability increases, making early disease control essential for livestock sustainability.

Preparing for Climate Extremes

The present cold wave highlights the growing influence of climate variability on livestock health. Lacetera (2022) and Kumar et al. (2023) stressed that climate-resilient livestock management, focusing on housing, nutrition, and health preparedness, is no longer optional but essential.

Conclusion: Prevention Is the Best Protection

Extra care during winter can prevent disease outbreaks, maintain productivity, and protect farmers' livelihoods. Scientific evidence provided by Collier (2023), Sejian (2022), Zhao (2021), Das (2021), Lacetera (2022), and Kumar (2023) clearly shows that proactive winter management is the key to safeguarding livestock health and farm income.

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