

Understanding Parasites in Milk: A Veterinary Perspective

Muhammad Yousaf Khan^{1*}, Syed Abdullah Gillani¹, Hassan Abbas¹, Aleem Asghar¹

1. Riphah International University, Lahore, Pakistan.

*Corresponding author: yk4830673@gmail.com

ABSTRACT

The article investigates the impact of parasites in milk within the subject of veterinary sciences. For instance, protozoa and helminths can debilitate well-being and the keenness of dairy items. We dig into the sorts of parasites found in milk, their impacts on the well-being of consumers, and potential dangers to humans who devour it. Illustrating preventive steps alongside the agreeable efforts that exist including veterinarians, makers, and administrative specialists, this article highlights the requirement for proactive approaches aimed at guaranteeing secure and quality milk generation.

Introduction:

Milk is a necessary component of numerous diets and has long been regarded for its dietary value. This article explores parasites that can affect milk, their impacts on animals and human wellbeing, and measures to guarantee milk security. In veterinary medication, the closeness of parasites in milk poses an interesting concern, influencing consumers' well-being and the quality of dairy products. These circumstances underscore the essential requirement for comprehensive understanding and practical organization techniques involved in the dairy industry. Tending to this issue requires a disciplinary approach, counting veterinary specialists, farmers, and investigators, to ensure the era of secure and wholesome milk. This extension article sets the organization for examining the complicated trade between parasites and milk in veterinary sciences, emphasizing the noteworthiness of energetic measures for guarding human and animal well-being (1).

Parasites in Milk

Common parasites found in milk include;

1. *Cryptosporidium spp.*

Cryptosporidium is a protozoan that undermines the safety of milk. It is capable to withstand the sterilization methods but can taint milk and cause gastrointestinal issues among consumers. Preventive measures from the fecal-oral route of transmission rely on strict cleanliness, water administration and observing, and security of animals and plants to avoid the spread of *Cryptosporidium* (2).

2. *Toxoplasma gondii*

Toxoplasma gondii if present in milk can be harmful for the one using it. This protozoan can cause abortion and a decrease in output. It can also result in sickness or flu in humans. Aseptic conditions must be followed to block the disease (3).

3. *Giardia lamblia*

Giardia causes serious health issues and it is commonly found in milk. Exposure to contaminated milk causes weight loss, diarrhea, and low productivity. It can also occur due to contact with infected udders (4).

Impact on Animal Health and Transmission

Giardia and *Cryptosporidium* are parasites commonly found in milk that can pose serious health risks to animals in veterinary medicine. Exposure to contaminated milk can lead to weakened immunity, gastrointestinal issues, and weight loss, which can ultimately affect livestock productivity (5). To make matters worse, these parasites are transmitted through either consumption of infected milk or contact with infected udders, making it difficult to prevent outbreaks from occurring.

Preventive Measures

1. Regular monitoring

Do check the milk sample using the molecular methods to find any parasites in milk. This aids in generating intervention and protects from impurities.

2. Hygienic practices

Maintain hygienic conditions during milking procedures and do appropriate collection. By decreasing infection chances we can stop parasites from entering milk.

3. Parasite control in animals

Properly follow deworming and parasite control measures for both endoparasite and ectoparasite prevention. Pay attention to stop the infection, and reduce the threat of infection spreading from milk (6).

Conclusion

Protection from parasitic threats is necessary to check the quality of milk. There is a complex relationship between milk and parasite. Experts, farmers and regulators play a key role in understanding, controlling and ensuring the

safety of milk. The aim is to produce milk good and healthy for consumption, maintenance of nutrition of milk and ensure the health of animals.

References

- [1] Alonso-Díaz MÁ, de Jesús Torres-Acosta JF, Sandoval-Castro CA, Campbell WB. Controlling the introduction and augmentation of parasites in and on domesticated livestock. *Sustainable Food Production Includes Human and Environmental Health*. 2014;191-228.
- [2] Cowell NA, Wohlsen TD, Harper CM, Langley AJ, Adams BC. Outbreak of *Cryptosporidium* linked to drinking unpasteurised milk. *Communicable diseases intelligence quarterly report*. 2002 Jan;26(3).
- [3] Dubey JP, Verma SK, Ferreira LR, Oliveira S, Cassinelli AB, Ying Y, Kwok OC, Tuo W, Chiesa OA, Jones JL. Detection and survival of *Toxoplasma gondii* in milk and cheese from experimentally infected goats. *Journal of food protection*. 2014 Oct 1;77(10):1747-53.
- [4] Inran M, Ahmad I, Malik MS, Hussain M, Khan MJ, Ahmad S, Ullah H. Prevalence of *Giardia lamblia* and gastrointestinal parasites in ruminants. *Global veterinaria*. 2013;11(6):708-13.
- [5] Thapa Shrestha U, Adhikari N, Kafle S, Shrestha N, Banjara MR, Steneroden K, Bowen R, Rijal KR, Adhikari B, Ghimire P. Effect of deworming on milk production in dairy cattle and buffaloes infected with gastrointestinal parasites in the Kavrepalanchowk district of central Nepal. *Veterinary Record Open*. 2020;7(1):e000380.
- [6] Sorge US, Moon RD, Stromberg BE, Schroth SL, Michels L, Wolff LJ, Kelton DF, Heins BJ. Parasites and parasite management practices of organic and conventional dairy herds in Minnesota. *Journal of dairy science*. 2015 May 1;98(5):3143-51.