

## ENVIRONMENTAL BACTERIA

Mastitis is caused by two different types of pathogens:

- Bacteria living and multiplying in the environment, called “environmental bacteria”
- Bacteria living and colonizing the skin (udder skin, teat skin or hand skin), named “contagious bacteria”.



Environmental bacteria



Contagious bacteria

Photo: Courtesy of DVM Josephine Verhaeghe, dairy technical support, CID LINES

For the last 20 years, we have seen an impressive improvement in milking hygiene protocol and contagious mastitis control, therefore, more and more mastitis cases due to environmental bacteria are happening. The most common environmental bacteria are coliforms (*E. Coli* and *Klebsiella spp* for instance) and *Strep. Uberis*. They are mainly associated with clinical mastitis.

These environmental bacteria are present in the bedding and the housing, especially in presence in the feces, bedding, dirty and wet environments.

- When infection pressure is raising (overdensity in the stable, low frequency of cleaning, poor milking preparation, diarrhea epidemic ...), clinical mastitis cases increase. Maintaining a clean and dry environment is a key point in environmental bacteria control.

- The infection can also happen in a “clean environment”, if the immunity of the cow is challenged: poor nutrition, low vitamins complementation, stress factors, for instance related to weather changes...

A disruption in the balance between infection pressure and immunity level will lead to an increase risk of mastitis due to environmental bacteria.

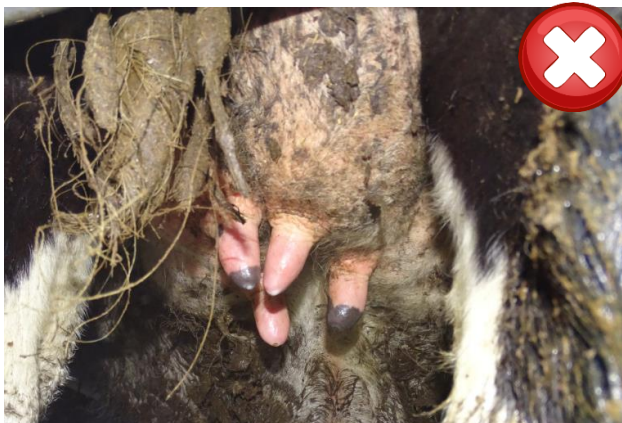


A wet and dirty environment caused by overpopulation is a direct risk for clinical mastitis

Photo: Courtesy of DVM Robin Franzon, dairy technical support, CID LINES

Milking time is a key moment to prevent environmental mastitis:

- Pre-foaming with an adapted solution allows to significantly reduce the infection pressure around teats prior to milking.



A pre-dipping product is formulated to be able to clean dirty teats in extreme situations.

Photo: Courtesy of DVM Robin Franzon, dairy technical support, CID LINES

- Post-dipping with barrier properties help to physically close the teat canal after milking, protecting it against bacteria from the environment,

- As the teat canal stays open for 30 minutes to 1 hour after milking, it is essential to keep the cows standing during this critical period.

