

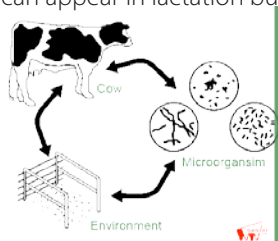
ENVIRONMENTAL MASTITIS

Pathology description

A *mastitis* is an inflammation of the mammary gland which is almost always due to the effects of infection by bacterial pathogens.

Environmental *mastitis* are *mastitis* caused by bacteria that can be found in the cow's environment. The primary habitat of bacteria causing environmental *mastitis* is in the environment: feces, soil, bedding or water. The contamination can occur during environmental contact of the teats at milking time or between milkings, or during dry period.

Environment *mastitis* are often clinical *mastitis* with a low increase in somatic cell count. They can appear in lactation but also during the drying period.



Main pathogens responsible of environment *mastitis* are : *Streptococcus uberis*, *Streptococcus dysgalactiae*, *Escherichia coli*, *Klebsiella spp.*, *Enterobacter spp.*, *Pseudomonas spp.*



Figure 1 : clinical mastitis

Cost estimation

- Milk decrease
- Milk discarded
- Treatment cost
- Udder damage

Vectors

• Environment

The bedding is the main factor of contamination. The flies can also be a vector.

• Material

All the material in contact with the udder can be a vector of pathogens: especially the milking machine, the water used for udder preparation and the intramammary infusions.

• People

People can be a vector, especially during milking : the contaminated hands can bring bacteria directly on the teats.

Preventive action

Herd environment should be as dry and clean as possible. The environment of maternity and dry cow is as important as that of the lactating cow. Avoid overcrowding, poor ventilation and general lack of farm cleanliness and sanitation. Regularly control milking equipment and avoid its contamination. Udder preparation: to milk cows with wet udders and teats is likely to increase the incidence of environmental *mastitis*. Teats should be clean and dry prior to attaching the milking unit. Washing and disinfecting the teats, not the udder, are recommended. Use water of good sanitary quality for udder preparation. Use a teat dip with a proven germicidal activity, efficient during milking interval and allowing a good teat conditioning. Avoid the contamination of the teats during milking preparation: hands and cloths of the milker must be cleaned.

Controlling action

Control of environment *mastitis* is achieved by decreasing teat end exposure to potential pathogens or increasing the cow's resistance to *mastitis* pathogens. Vaccination is not yet efficient against *mastitis* pathogens. The cow's resistance can increase thanks to an adapted feed ration and a correct level of vitamins, trace elements and minerals. Hygiene programs described for preventive action must be also adopted to control environment *mastitis*. Lactating and dry cow therapies, culling plan and feeding plan must be implemented under the advice of your veterinarian.

Advised protocols

For each possible vector, a hygiene protocol must be implemented. See the specific purpose protocol :



GENERAL
HYGIENE



PERSONNAL
HYGIENE



MILKING
MACHINE



MILKING
ROUTINE