PRELIMINARY EVALUATION OF THE MOST FREQUENT MASTITIS PATHOGENS OCCURRING IN POLISH DAIRY HERDS*

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Udder inflammations in dairy cows (mastitis) are one of the most common issues for milk producers. Mastitis generates additional cost for producers and decreases milk quality. In Poland mastitis is the 2nd reason of cow culling (after infertility) in dairy herds. Most of the clinical udder inflammations have environmental source and are mainly caused by different bacteria species (about 90%). Excessive antibiotics use in the past in dairy cows treatment influenced on the increased antibiotic resistance of mastitis pathogens.

The aim of the study was preliminary evaluation of mastitis pathogens occurrence in Polish dairy herds.

Milk samples (n=419) were taken from herds (n=23) in which occurred mastitis cases. Milk was placed in sterile cups during evening milking and delivered to Cattle Breeding Division laboratory. Samples were store for 12 hours in the fridge (4°C). After 12 hours milk was used in microbiological analysis. Several specific mediums were used to diagnose bacterial and fungi pathogens species. In the experiment were used several mediums: Mannitol Salt Lab Agar, Edwards Lab Agar, Rose Bengal, Enterococcus Confirmatory Lab Agar, Pseudomonas CN Lab Agar Base, Eijkman Lactose Medium, Salmonella Shigella Lab Agar (Biocorp, Poland). Inoculations were stored for 24-48 hours (37°C, 5% CO_2) to properly diagnose mastitis pathogens.

At least one pathogen species was diagnosed in over 90% of milk samples. The most frequently isolated pathogens were: *Escherichia coli* (76,61%) *Staphylococcus aureus* (41,29%), *Streptococcus dysgalactiae* (40,81%), *Enterococcus* sp. (40,57%) and *Staphylococcus epidermidids* (28,16%). In 7,88% samples were diagnosed fungi from *Aspergillus* sp. genera and yeasts from *Candida* sp. genera.

Obtained data suggest that most frequent species involved in udder inflammation process are staphylococci and streptococci. It is also important to point out that different species from *Enterobacteriaceae* family (e.g., *E. coli*) were diagnosed in large amount of sample which may be the reason of not appropriate environmental conditions in dairy herds the effect in higher mastitis cases frequency.

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