Business Oriented Creature Identification

Péter Magyar, Gábor Geda, Tibor Tajti, András Perjési, Tamás Gregus

Abstract

Bovine mastitis is the most significant disease of dairy herds. The milk from a cow with inflamed udder degrade the quality of the milk handed in. It's necessary to be able to separate these animals with big safety.

The currently prevalent method works in such a way that a sample is bought from the cow before the milking and workers infer the inflamed state with the help of chemical reagents. There are several problems with this method. It requires more human resources, chemical materials, workers have to wash and disinfect the sample trays between two cows.

It could be possible to detect the inflamed udder by measuring the cow's udder quarters with automated infrared thermometer or thermal camera system, but these devices can't replace the currently used method, because they don't give so reliable results. Maybe, they could be pre-filters.

Thanks to RFID technology, the identification of animals is solved, but it would be necessary to identify the cow's udder quarters one by one, because anatomically they belong to separate unit. If only one of the udder quarters is inflamed, the cow still can lactate from the remaining three.

Via implantable RFID temperature sensors we have the opportunity to continuously monitoring the temperature of the cow's udder quarters. Analysing the data in it's process we will see the temperature change as the cow's health status changes.

The goal is to develop a method and a system based on that, which would be less lubberly, much safer, cost-effective and technologically simpler and „cleaner".