23rd July 2016

ABSTRACT

One of the biggest health problems of high production Holstein-Friesian dairy cows is the mammary inflammatory disease – mastitis. During mastitis infection periods the amount of milk produced is reduced and the milk can not be sold for human consumption. In addition to the loss of milk quantity, additional costs are incurred via drug use and excessive labor demands. It is common that one of the primes reasons culling cows is adverse udder health. In practice, there are many ways to reduce mastitis, which are mostly courses of treatment rather than prevention.

Prevention is part of providing suitable environmental conditions for cows.

Besides environmental factors - stalling and feeding – a careful study of the action and function of milking equipment and the relative effects of the various pressures warrants careful consideration.

The joint research project of the Agricultural Faculty of the University of Szeged, Surepulse Precision Milking and SZTE Tangazdaság Ltd. (pilot farm of University of Szeged at Hódmezővásárhely) is based on the comparison of machine milking techniques applied in large-scale cattle farms. In particular the study includes the analysis of the effect on milk quality and cow comfort.

The aim of the experiment is to compare cow health and production results of the experimental livestock using the new, newly patented CALF 35 milking equipment on the dairy farm of SZTE Tangazdaság Ltd. comparing past data using conventional types of milking technology with the new CALF 35 technology.

During the theoretical research, the Faculty of Agriculture and the Animal Nutrition Laboratory of the Faculty of Agriculture will also study effects of milking on udder health including teat scoring. Investigation by the staff of the Agricultural Research Institute of the University will continue to determine the economic effects of milk production. The technical parameters of the milking equipment are examined via the involvement of the Environmental Science Institute.

Mikó Józsefné Dr. Jónás Edit

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Reference: Calf 35 experiment

Before starting the experiment, we perceived the value of developing a milking technology that, unlike previous practices, takes directly into account the physiological characteristics and needs of dairy cows.

Today, modern animal husbandry technologies increasingly require consideration of the welfare of animals, which are placed under increasing productions demands. By focusing on these principles, the inventor has introduced new technologies which meet these principles and which in turn bring significant economic benefits.

The experiment carried out at the SZTE Tangazdaság Kft (pilot farm of University of Szeged at Hódmezővásárhely) has proved the new technology is works. The effect on the cows is a much more gentle process, and therefore the mastitis caused by "rough milking" has disappeared, resulting in a significant reduction in drug use and costs. Since new milking technology takes the animal's needs into utmost importance the milking process is much friendlier to the animals, and as a result the animals welcome the visits to the milking parlour. Animal irritation and cluster kick offs of clusters have almost been eliminated. During the experiment, it is clear that the general health status of the cows improves, and it is likely that their useful life will be improved.

Parallel with the positive results we can quickly show significant economic benefits. Since the first milking sessions we see as a result of the Calf 35 natural milking technology that milking itself does not cause pain to the cows, so the milk flow speed has increased, reducing the milking time.

As a result of gentle milking, damage in teat tissue has been reduced and improved with a reduction in past lesions and almost no new lesions. A significant decrease in somatic cell count was experienced in a short time frame.

In my opinion, this new milking technology will revolutionize the machine milking process of dairy animals, taking into account the natural needs of animals and bringing significant operational and economic benefits for participants in the dairy industry.

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