

Udder Health and Milk Quality as Part of the Veterinary Herd Controlling System

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Introduction

Critical control points (CCP) and control points (CP) as parts of a quality assurance system (QAS) for the control areas "Udder Health" and "Milk Quality" are evaluated and implemented in the Veterinary Herd Controlling System (VHC-System) introduced by MANSFELD et al. (2002).

Materials and Methods

By means of a search of international literature a quantity of direct and indirect CCPs and CPs was collected. The papers taken into consideration were judged by their scientific value and their applicability to the practical situation of dairy farms. Suitable CCPs and CPs and their indicators were implemented in a flow chart system to be used by the veterinarian as a tool for the status quo assessment as the first step. When the indicators of control points exceed the range the deviating results lead to the next step of the VHC Pyramid of Intensity initiating further investigation and/or some action of improvement. On the lowest level of intensity ("status quo assessment") critical control points are looked at, which should be routinely done in all cases.

Results

In the control area "Milk Quality" determination of "somatic cell count", "bacterial count", "fat content",

"protein content", "freezing point" and detection of "antimicrobial agents" were fixed as parts of the 1st step of the VHC pyramide (CCPs). In the control area "Udder Health" the detection of "direct udder health indicators" ("somatic cell count", "results of bacteriological examination of milk samples" and "mastitis incidences"), "milk production" and "hygiene score" were classified as CCPs. Further steps of the VHC pyramide are concerning the factors "management" (drying off management, milking management), "housing", "feeding", and "breeding" (linear description of the udder shape, milk production, milk ingredients).

Significance

The described QAS, designed as a flow chart as part of the VHC-System, represents an efficient tool to control "Udder Health" and "Milk Quality" on dairy farms. It is based on the results published in the international scientific literature. During the 2nd part of the project the components of the QAS will be implemented into the dairy production process. Actual effectiveness as an early warning QAS working as a Controlling System will be determined and an economical evaluation will be done.