The objective of this study was to evaluate the milking-hygiene and milk-quality in dairy farms with automatic milking systems (AMS). The study was carried out in 33 Hessian dairy farms between September 2008 and March 2009. In the field of milking-hygiene one main aspect was to examine the efficiency of the different methods of cleaning/ disinfection that takes place after every single milking process. To this end swab samples were taken from teat cup liners, cleaning units etc. of the milking robot after a cow has been milked and cleaning/ disinfection has taken place. This swab samples were examined semi-quantitative bacteriological. Convincing results were reached by disinfection with hot steam. Farms that used disinfectants (Peracetic acid, Hydrogen peroxide) for disinfection of milking clusters between milking cows in most cases did not reach adequate concentrations so that no satisfactory disinfection effect could be observed.

The second aspect was the examination of the MILK QUALITY. Bulk-milk samples as well as milk sample after the milk receiver were taken for microbiological analysis (bacteriological status, somatic cell count etc.) to find out at which segment of the AMS a possible contamination of the raw milk takes place. Milk samples taken after the milk receiver showed a better bacteriological status than the bulk milk samples. But contrary to ones expectations milk samples from the milk receiver already have not been germ-free, so that one could proceed from the assumption that even during the milking process a contamination of the raw milk takes place.

The results of the bulk-milk samples of farms with AMS were compared with the bulk-MILK QUALITY of conventional milking farms. Conventional milking farms showed a better bacteriological status than farms with AMS concerning pathogens that function as indicators for the hygienic conditions around the milking process. The results of this study show the important influence of the management around the cleaning and disinfection process of the AMS on milking-hygiene and milk-quality. It is indispensable for the appropriate farmers to control the functionality of these disinfection equipment as well as the concentrations of the used disinfectants.