

**Does herd size affect animal welfare in dairy cattle?***D. Gieseke<sup>1</sup>, C. Lambertz<sup>2</sup> and M. Gauly<sup>2</sup>*

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Over the last decades the number of cows per farm increased continuously in Europe. Different stakeholders are concerned about the intensification of livestock production, because they perceive large-scale dairy farms with serious animal health and welfare problems. However, it is still scientifically not proven whether there is a direct correlation between herd size and these factors. Therefore, the aim of this study was to evaluate the animal welfare status on 80 conventional dairy cattle farms with different herd sizes (small: <100; medium: 100-299; large: 300-499; very large: ≥500 cows) using animal-based measures of the Welfare Quality® Assessment protocol for dairy cattle (WQP). A mixed model was performed to investigate differences between the four herd size classes. Body condition score (% lean cows), water supply (cm trough per cow) and incidence of milk fever were rated better in farms with more than 300 cows compared with small and medium size farms ( $P < 0.05$ ). In contrast, the frequency of vulvar discharge rose with increasing herd size ( $P = 0.03$ ). The prevalence of mastitis, coughing or diarrhea were found not significantly different in all four classes. Injuries such as severe integument alterations i.e. lesions and swellings (3-71%) as well as severe lameness (0-74%) were detected in each category at a comparable level ( $P > 0.05$ ). The overall welfare score (range 0-100) was low, but did not differ between herd sizes (small: 38.6, medium: 37.2, large: 43.8, very large: 40.5;  $P > 0.05$ ). In conclusion, based on the WQP herd size did not directly affect welfare status of dairy cows.

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**Session 43****Theatre 3****The impact of husbandry conditions on claw health in Austrian dairy herds***J. Burgstaller<sup>1</sup>, D. Feiersinger<sup>1</sup>, B. Fuerst-Waltl<sup>2</sup>, F. Steininger<sup>3</sup>, J. Kofler<sup>1</sup> and C. Egger-Danner<sup>3</sup>*

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The growing human population on earth and the competition for farmland creates a challenging situation for dairy farmers. The Austrian cattle breeders are therefore looking for the efficient cow, which is adapted to the local conditions, has a high lifetime milk production, stays healthy, calves without complications every year and can be fed with farm grown foodstuff. To find those cows, breeds and rearing systems, data were collected from 170 breeding herds consisting of 5,500 dairy cows. The first step included the evaluation of farm specific factors, including animal husbandry, feeding, claw trimming practice and management. At every milk yield recording event, which was performed 8 to 11 times during the year 2014, BCS, lameness scoring, body weight and some body measures were evaluated. During the observation period the ration was analysed and documented, data on animal health and claw trimming was collected. Lameness groups were created, according to the data on lameness scoring, to be able to compare cows that have never been lame, to cows that were slightly, moderately or severely lame. Farm specific data, housing condition, flooring and bedding type, use of pasture or alpine grassland was evaluated concerning its impact on claw health and lameness. The evaluation of housing types gave evidence that cows kept in tied stall barns (which is only allowed by law if combined with access to pasture for at least 90 days) showed the best claw health status with 60% non-lame cows, followed by cows in free stalls with straw bedded cubicles and plane walking alleys (50.6%). Worst results in this investigation were achieved by cows kept in free stall cubicle systems with rubber mattress bedding and slatted floors (39.5%). Herds that used pasture and alpine grassland had a better claw health compared to all year in herds.