Welfare assessment in Danish dairy herds

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The Danish Animal Welfare Index (DAWIN) has been developed as a monitoring tool for the national level of animal welfare for dairy cattle and dairy calves (age 0-180 days). As part of the late Veterinærlig II, a collaboration between Århus University, the University of Copenhagen and the Danish Veterinary and Food Administration developed assessment protocols and index models for the evaluation of the animal welfare for dairy and swine livestock. The assessments were to be based on a hedonistic and holistic view on animal welfare, hence, centering on the animal and its experiences. Protocols, therefore, focused mainly on animal-based measures supported by resource- and management-based measures in order to cover the four main aspects of good feeding, good housing, good health and appropriate behavior. The included measures were selected based on their validity in respect the given welfare aspect, robustness, sensitivity and feasibility. Finally, measures were evaluated in a weighted linear aggregation model. An expert panel was used to create measure weights for the implementation in the index model.

During 2015 a total of 60 Danish dairy herds were visited and assessed based on a dairy cow protocol consisting of 27 measures and a calves protocol with 18 measures. On-farm assessments were carried out around morning feeding and/or milking by two trained observers per herd. Measure scores were either dichotomous i.e. presence/absence of clinical signs and compliance/non-compliance with legislation; or graded for severity (none/moderate/severe deviation from the normal).

The results aim at describing the animal welfare status at a national rather than at herd level. Hence, for the year 2015 the biggest welfare challenges for dairy cows were found to be lameness (clinical issue), sufficient water supply (compliance), space allowance/over stocking (compliance) and the presence of sufficient numbers of working cow brushes (compliance). Furthermore, the cleanliness levels of cows (i.e. the proportion of dirty cows) together with the proportions of cows lying outside the designated lying area indicate problems with cubicle dimensions and/or design.

The biggest welfare challenges for the youngest calves were found to be amongst the resource-based measures within the access to water for non-weaned calves, access to other calves, artificial teats and brushes; and the size of individual pens and over stocking in group pens.