Identification of areas with poor welfare in Danish dairy herds

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Animal welfare varies considerably between herds and within certain welfare areas e.g. housing, feeding or health aspects. The objective of this study was to describe the distribution of animal welfare scores for selected animal welfare measures and herd level scores using an animal centred approach for assessing animal welfare to derive at scores on measure, criteria and herd levels. The present study assessed a total of 28 measures (12 resource- and 16 animal-based measures) describing eight criteria within housing, feeding, health and behaviour aspects of dairy cow welfare. Data were collected during 2015 in 60 Danish dairy herds. For the animal-based measures, cows were sampled according to the Welfare Quality protocol, while resource measures were assessed across all cows. An index model was created using weighted and aggregated herd means of the graded measures adjusted for herd size. The model provided scores ranging from poor to excellent welfare (score 0-100) with a score below 50 indicating unacceptable welfare for each level. Overall herd scores ranged from 71.5-88.6 (SD=3.9) with a mean score of 80.4, and thus an overall acceptable welfare for study herds according to the present protocol. Identification of individual measure scores <50 were used to identify areas giving rise to welfare concerns. Results showed: 75% of the herds had unacceptable water supply; total floorage was unacceptable for 56% of the herds; the number of animals lying outside the lying area was unacceptable in 38% of the herds. In addition, 57% of herds had unacceptable levels of integument alterations (i.e. lesions and swellings) and 70% of the herds did not have an acceptable number of cow brushes. Problem areas were primarily found in relation to resource measures. In conclusion, improved welfare for Danish dairy cows could potentially be achieved by focussing on water supply, stocking density and cow brushes.