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Can animal-based welfare assessment be simplified? A comparison of the Welfare Quality[®] protocol for dairy cattle and the simpler and less time-consuming protocol developed by the Danish Cattle Federation

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Abstract

Welfare assessment protocols using primarily animal-based measures are believed to give valid information about the welfare of animals. However, they tend to be time consuming and therefore costly, thus in practice there is often considerable reluctance to use them. In the present study, the relatively quick to use, simple but non-validated welfare assessment protocol for dairy cattle developed by the Danish Cattle Federation and the validated comprehensive Welfare Quality[®] protocol were compared in Danish conditions. In total, 44 Danish dairy herds were evaluated using the two protocols. The protocols were correlated on four sub-levels (corresponding to the 'Principles' in the Welfare Quality[®] protocol) and on the Overall welfare score. They correlated significantly with regard to the Principles 'Good health' and 'Appropriate behaviour'. Significant correlations were not found for 'Good feeding', 'Good housing', and the Overall score. On the basis of this we changed the Danish Cattle Federation protocol by introducing six new measures, changing three measuring procedures and omitting two measures. This extended protocol was found to correlate significantly with the Welfare Quality[®] protocol in all four Principles and on the Overall score. The extended protocol still has the advantage of the original Danish Cattle Federation protocol whereby under Danish field conditions it will take only 2 h to apply as opposed to 7–8 h for the Welfare Quality[®] protocol. We believe that the extended protocol balances, in a good way, the demands of practicality against its value as a diagnostic test.

Keywords: animal-based measures, animal welfare, dairy cattle, on-farm assessment, welfare-assessment protocol, Welfare Quality[®]