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Assessment time of the Welfare Quality® protocol for dairy cattle

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Abstract

The Welfare Quality® (WQ) protocols are increasingly used for assessing welfare of farm animals. These protocols are time consuming (about one day per farm) and, therefore, costly. Our aim was to assess the scope for reduction of on-farm assessment time of the WQ protocol for dairy cattle. Seven trained observers quantified animal-based indicators of the WQ protocol in 181 loose-housed and 13 tied Dutch dairy herds (herd size from 10 to 211 cows). Four assessment methods were used: avoidance distance at the feeding rack (ADF, 44 min); qualitative behaviour assessment (QBA, 25 min); behavioural observations (BO, 150 min); and clinical observations (CO, 132 min). To simulate reduction of on-farm assessment time, a set of WQ indicators belonging to one assessment method was omitted from the protocol. Observed values of omitted indicators were replaced by predictions based on WQ indicators of the remaining three assessment methods, resources checklist, and interview, thus mimicking the performance of the full WQ protocol. Agreement between predicted and observed values of WQ indicators, however, was low for ADF, moderate for QBA, slight to moderate for BO, and poor to moderate for CO. It was concluded that replacing animal-based WQ indicators by predictions based on remaining WQ indicators shows little scope for reduction of on-farm assessment time of the Welfare Quality® protocol for dairy cattle. Other ways to reduce on-farm assessment time of the WQ protocol for dairy cattle, such as the use of additional data or automated monitoring systems, should be investigated.

Keywords: *animal welfare, dairy cows, on-farm assessment, prediction, protocol, Welfare Quality®*