

assessing animal welfare in costa rican dairy herds based on the Welfare Quality® protocols

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Animal welfare is an important issue in farming, and welfare assessment is vital to improve the welfare of farm animals. Since the welfare status of dairy farms in Costa Rica was not known, the Welfare Quality® protocol (2009) was applied in 60 dairy herds around the country. The aim of this study was to evaluate the applicability of this protocol in Costa Rica. The farms were all from the biggest dairy producers' cooperative in the country. The protocol assesses the welfare in four areas: feeding, housing, health and behaviour. Most of the farms were scored as 'enhanced' (55%) or 'acceptable' (37%), the rest were 'not acceptable'. The protocol was applied in a wide variety of farms: extensive, semi-intensive and intensive farming systems, equatorial to tropical savanna climate, etc. Since in this protocol most of the measurements are taken directly on the animals and not on the infrastructure, the protocol was easily applied on the farms of Costa Rica. Nevertheless, some adjustments are necessary for a more accurate use of the protocol in the country, mainly regarding housing-dependent measurements like the evaluation of the drinkers and the avoidance distance. In 92% of the farms cows were kept on the pasture at least half of the day, in these cases, the drinkers on the pasture were different from those in the stable, which made the scoring of the drinkers difficult. Also, around 20% of them had feeding troughs that limited the vision of the cow, making the avoidance distance test inaccurate. Moreover, it is important to create a method to evaluate heat stress, a key parameter in tropical countries, since for example in Costa Rica the average temperature is 24 °C and the average humidity is of 81%, which gives an average temperature-humidity index of 73, which has been categorized as mild heat stress for cattle. It was concluded that since the protocol mainly consists of animal based measures, it can be easily adapted to the different management methods and environmental conditions in Costa Rica.