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## **The Welfare Quality<sup>®</sup> assessment protocol: how can it be adapted to family farming dual purpose cattle raised under extensive systems in tropical conditions?**

A Hernandez<sup>†</sup>, C Berg<sup>\*†</sup>, S Eriksson<sup>†</sup>, L Edstam<sup>†</sup>, A Orihuela<sup>‡</sup>, H Leon<sup>§</sup> and C Galina<sup>#</sup>

<sup>†</sup> Department of Animal Environment and Health, Swedish University of Agricultural Science, Skara, Sweden

<sup>‡</sup> Facultad de Ciencias Agropecuarias, Universidad Autónoma del Estado de Morelos, 62210 Morelos, México

<sup>§</sup> Facultad de Medicina Veterinaria y Zootecnia, Universidad Autónoma de Chiapas, 29059, Tuxtla Gutiérrez, Chiapas, México

<sup>#</sup> Departamento de Reproducción, Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México, 04510 DF, México

\* Contact for correspondence and requests for reprints: author: lotta.berg@slu.se

### **Abstract**

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Family farming is still the main source of income for many people in the tropical regions of the world. At the same time, modern society is quickly becoming more aware of the welfare of animals for human consumption. The main objective of this study was to illustrate the need to modify certain aspects of the original Welfare Quality<sup>®</sup> (WQ) protocols developed by the EU-funded WQ project, under the conditions of small community farmers in the tropics. Thirty-four dual purpose farms in the State of Chiapas, Mexico, which had their main production focus on milk but for whom beef production was also of significant value, were evaluated utilising a merged version of the WQ protocols for dairy and beef cattle. Based on their average score, the farms obtained at least an acceptable level in each indicator of welfare. However, after merging indicators from the dairy and beef cattle protocols of WQ in order to adjust it to the prevailing conditions in the tropics, a number of sections are not applicable. This is particularly true of the section related to good housing, where most of the items do not apply due to the absence of infrastructure; the farms obtained a very high score in this section but further studies to verify whether this reflects an accurate assessment of the welfare status should be carried out. In general, the approach of the WQ protocol was useful, however certain aspects are quite different from the conventional intensive farming systems predominantly used in Europe and there is a need to implement a number of modifications.

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**Keywords:** animal welfare, *Bos indicus*, *Bos taurus*, dual purpose cows, sustainability, tropics