Tablet-based applications (apps) are starting to be widely used to capture data while in the field. This case study used the app ‘CommCare’, a flexible digital data collection platform, to evaluate the practicality of this method of data collection in developing countries by assessing Balinese cattle welfare.

A survey based on the AssureWel dairy protocol (2015) was adapted to assess 183 Balinese cattle. A total of 28 animal-based questions, including body condition score (BCS) and animal cleanliness, were assessed by eight field staff. Following scoring, field staff then took photographs of these indicators for an expert observer to independently assess remotely.

Of the 158 pictures taken, 42% could be improved in terms of position, focus and obstructions, but overall 72% were clear enough for expert assessment. The average BCS was 3 (both field officers and the expert), but the correlation was low (r = 0.34). Field officers scored 56% of the cattle as dirty, compared to the expert’s 70%, and the correlation was low (r = 0.36).

BCS scores did not indicate a welfare concern, but dirtiness needs further evaluation. The evaluation of photograph quality and the low reliability of the two measures highlights the importance of training survey users. It is recommended that, in addition to specific training around how to assess animal-based welfare, training should include instruction on how to effectively capture high quality images with appropriate orientation. Effective app use has significant advantages. This specific survey can assess cattle welfare standards in the field and linked photographs provides the potential for longitudinal tracking and near real-time communication with international project partners. Broadly, the connectedness this technology offers between farmers/field staff in developing countries and international experts could contribute to the One Health concept, and may help promote the implementation of dairy welfare standards around the world.

Key words: BCS – dairy –new technologies – inter-observer reliability – on-farm welfare assessment