Investigating the welfare, management and human-animal interactions of cattle in four Indonesian abattoirs

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Abstract

This study reports novel information on the animal handling, management and human-animal interactions in Indonesian cattle abattoirs. The slaughter of 304 cattle was observed and there was a high percentage of re-stuns in all abattoirs (range: 8–18.9%) when compared to a variety of international auditing guidelines. The average stun-to-neck cut time was within international recommendations (average: 9 s; range: 4–15 s). Time spent in lairage varied between animals and facilities and was compliant with international guidelines. Handling times were extremely variable (2 s–23 min 40 s), but were only weakly correlated with a variety of handler techniques including the total number of handler interactions (sum of visual, auditory and tactile interactions, suggesting that long handling time does not increase handler interactions. There was a moderate correlation between the subjective handling scale and most of the objective behaviours, indicating that this may be a useful way to summarise handler behaviour in future assessments. The current study provides novel information about animal welfare in Indonesian abattoirs and highlights that management practices at the four abattoirs generally comply with international standards. The results also suggest that the subjective handling scale was moderately associated with the frequency of handler interactions, and so may be a useful measure of handler behaviour.

Keywords: animal welfare, cattle, handling, human-animal interactions, live export, slaughter

Introduction

The management and handling of animals prior to slaughter has the potential to significantly compromise welfare before death. Factors affecting an animal’s welfare at the abattoir can include poor handling, mixing with unfamiliar animals, novel, intense and startling stimuli and confinement in transport and lairage (Gregory 2005; Terlouw et al 2008; Miranda de la Lama et al 2012). Poor handling presents a particular risk to animal welfare (Seng & Laporte 2005) and the knowledge, experience and attitudes of the handler influence handler behaviour and, as a consequence, cattle behaviour (Coleman & Hemsworth 2014). Similarly, the fear, temperament and behaviour of the animal influence what the handler does (Coleman et al 2012). This relationship has been repeatedly demonstrated in a variety of livestock species both on-farm and at the abattoir (Hemsworth et al 2011). Understanding these human and animal interactions can help to identify what situations are likely to result in welfare compromise.

Internationally, animal welfare is recognised as being of increasing importance (Gerber 2010). This increased focus on animal welfare is being driven from a variety of perspectives including economic and productivity benefits to farmers, improved trade access and social and consumer expectations (Fraser 2008; Mellor & Bayvel 2008; Gerber 2010). Guidelines on animal welfare set by the World Organisation for Animal Health (OIE 2014) address factors that may affect an animal’s welfare at slaughter. The OIE’s guidelines are not binding, nor are they enforced by the OIE; however, they provide an internationally agreed set of science-based recommendations as to how animals should be managed to limit compromises to their welfare (Bayvel 2004; Fraser 2008).

Animal welfare and human-animal relationships in European and English-speaking abattoirs have been evaluated and reported broadly (Grandin 2007; Ferguson & Warner 2008). However, such data are relatively sparse in other countries. The way animals are managed and processed outside European and English-speaking markets can be markedly different in terms of scale of production, infrastructure, market requirements, the availability of manual labour and technology. As a result, research in these regions is necessary (Fraser 2008). Initial investigations that give an overview of the situation are a valuable first step to understanding regional welfare issues. With this in mind, the aim of this study was to evaluate the handling, welfare and management of cattle in four Indonesian abattoirs from...