

Survey investigating cattle veterinarian and producer perceptions of pain experienced by beef and dairy cattle undergoing castration and dehorning

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Introduction

Despite the recognition that many livestock management practices cause pain in cattle, the routine use of pain management at the time of these procedures in dairy and beef cattle remains limited. The decision to use pain management requires identification and evaluation of the significance of the pain experienced by cattle during procedures, such as castration and dehorning. The objective of this study was to evaluate how cattle veterinarians and producers qualify the pain experienced by beef and dairy cattle and how this qualification relates to their use of pain mitigation.

Materials and Methods

An on-line survey was developed to evaluate how cattle veterinarians and producers in the United States perceive the pain experienced by beef and dairy cattle during painful procedures and how this perception relates to their use of pain mitigation. In Summer 2018 the survey was distributed electronically to multiple listservs (BEEF Magazine, American Association of Bovine Practitioners, National Milk Producers Federation Farmers Assuring Responsible Management evaluators, Dairy Moms and Dairy Girls Facebook groups; N=46,577). Respondents were asked to indicate how painful (1=no pain, 6=worst pain imaginable) they would consider certain procedures to be across three ages of cattle (< 2 mo, 2-12 mo, > 12 mo). Respondents were also asked how likely (1=never, 5=always) they were to use local and systemic pain relief drugs during these procedures. Ordinal logistic regression was used to analyze the impact of role within the industry (producer = PR; veterinarian = VET; PV = both) on respondents' perceptions of how painful a procedure or illness might be and their willingness to use pain mitigation.

Results

A total of 1,187 (2.5%) surveys were received; 41.9% of respondents identified as PR, 47.9% as VET, and 10.2% as PV. Overall, 45.3% of PR indicated using pain management in their cattle herds, whereas 91.9% of VET respondents and 83.5% of PV indicated using pain management. When asked specifically about local analgesic use in surgical castration

and dehorning, VET consistently "always" used local analgesics more frequently than PR for all ages of cattle (role, % < 2 mo, 2-12 mo, > 12 mo; castration—VET: 22.1%, 27.0%, 38.8%; PR: 8.5%, 10.3%, 8.7%; dehorning—VET: 50.4%, 56.1%, 68.1%; PR: 15.0%, 14.8%, 14.4%). Additionally, all role types more frequently indicated using local analgesic when performing dehorning, compared to surgical castration across cattle age categories. VETs were more likely to rate surgical castration in calves between 2-12 mo old (OR [95% CI] = 1.37 [1.08-1.72]) and dehorning in all ages of cattle (< 2 mo, OR [95% CI] = 4 [3.13-5.26]; 2-12 mo, OR [95% CI] = 2.17 [1.69-2.78]; > 12 mo, OR [95% CI] = 1.96 [1.54-2.44]) as more painful than PRs. When asked to rate the pain experienced by cattle during surgical castration and dehorning (1 = no pain, 6 = worst pain imaginable), VET indicated "severe" pain for castration of adult cattle and dehorning of all ages of cattle (4 +/- 0.04) and indicated "moderate" pain for castration of calves less than 12 mo of age (3 +/- 0.04). Producers indicated "severe" pain was experienced by cattle during dehorning and castration of adult cattle (4 +/- 0.05) and indicated "moderate" pain for castration of calves less than 12 mo of age (3 +/- 0.05) and for dehorning of cattle less than 12 months of age (3 +/- 0.05).

Significance

These data suggest differences in the observation, evaluation, and treatment of pain in cattle between cattle producers and veterinarians. These results highlight the need for improvement in education within all sectors of the cattle industry in how to identify, assess, and treat pain.