Measuring and mitigating pain during castration

Project Title:
Effect of age and handling on pain assessment and mitigation of common painful routine management practices

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Background
Public concern regarding the pain associated with castration, dehorning and branding of beef cattle is increasing. Past research has focused on individually housed dairy calves, or feedlot cattle. There is a lack of information regarding the influence of age and pain medication on preweaning beef calves in a herd environment.

Objectives
To evaluate the relative impacts of age, technique, and pain medication when preweaning beef calves are castrated at the same time as branding or as a separate procedure.

What they will do
In year 1, calves will be castrated (control, surgical or banding) at 0, 60 or 120 days of age. Physiological, behavioural and performance data will be recorded. The age identified as most appropriate for animal welfare will be examined in year 2, when the potential benefits of analgesic medications will be examined in conjunction with surgical castration. Year 3 will examine the effects of pain medication when surgical castration method is combined with hot-iron branding (at the age identified in Year 1). Additional physiological and behavioural measurements will be collected on subsets of each treatment group to assess long-term impacts of these procedures and medications.
Implications

This research will generate science-based recommendations regarding the best age to carry out painful routine management procedures and identify target ages which may require pain mitigation. A practical method of alleviating both acute and chronic pain associated with band and knife castration in young beef calves will also be assessed and identified. This information is required to make sound industry recommendations to the Beef Codes of Practice.

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