Attitudes of beef producers to disbudding and perception of pain in cattle

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Abstract

Pain is an indicator of welfare status in livestock, and attitudes play a key role in the assessment and treatment of pain in animals. Veterinarians’ and dairy producers’ perceptions of cattle pain are affected by gender, age and work experience. The aim of this paper was to study beef producers’ attitudes regarding disbudding as well as the painfulness of certain cattle diseases. A questionnaire was sent out to 1,000 Finnish beef producers and the response rate was 44%, representing 19% of all Finnish beef producers. Producers graded their attitudes on a five-point Likert scale and perception about pain on an eleven-point numerical scale. Factor analysis was used and four factors were established. These factors described producers’ assessment of disbudding-related pain, their sensitivity to pain in cattle, their willingness to self-medicate disbudded calves and their perceived importance of horns. Factor scores were tested for differences between genders and the use of disbudding on farms with Mann-Whitney U-tests. Kruskal-Wallis tests were used to assess differences among producers’ age, work experience and herd size. Female beef producers assessed animal pain higher than male beef producers. Older and more experienced beef producers showed more positive attitudes towards cattle with horns than younger or less-experienced ones. Older beef producers were more sensitive to cattle pain than younger producers and beef producers with a smaller herd size took disbudding pain more seriously and were more sensitive to cattle pain than the producers with larger herds. Producers who did not use disbudding valued horns more than producers using disbudding.

Keywords: animal welfare, attitude, beef producer, cattle pain, disbudding, human-animal relationship

Introduction

Beef cows (also often referred to as suckler cows) are kept for beef production and, in suckler herds, calves are usually kept with their dams up to six months of age. In 2011, there were 57,000 beef cows in Finland (LUKE, Natural Resources Institute Finland 2015). Finnish beef production is mainly based on dairy breeds as only 20% of all beef originates from actual beef breeds. Finnish beef farms tend to be family operated with very versatile housing systems, from warm tie-stalls to light, shelter-based winter pastures. Supplement feeding is needed and all-year-round pasture-based systems do not exist as pasture time is very short, only 120–150 days a year (Tiilikainen et al. 2003). Since many of the most common beef breeds in Finland (ie Charolais, Hereford, Limousin, Aberdeen Angus and Simmental) are at least partly polled, the usage of disbudding in Finnish beef farms may be rare, but is yet to be studied.

Disbudding entails destroying the horn buds in young calves up to 8–12 weeks of age prior to any horn material becoming visible (ALCASDE 2009). The term ‘dehorning’ refers to amputation of the horns once they grow longer and become attached to the underlying frontal sinus. This is common in beef cattle around weaning worldwide, but is not performed in Finland (ALCASDE 2009). Tipping is practiced as an alternative to dehorning cattle of various ages and the procedure can range from light tipping (2 cm cut off the end of the horn with no bleeding, ie blunting the horn) to heavy tipping (reducing the length of the horn to around 10 cm with bleeding and exposed cavities) (Prayaga 2007).

In the literature, use of the terms ‘disbudding’ and ‘dehorning’ varies and can cause confusion. It is often the case that ‘dehorning’ is used when ‘disbudding’ is meant. Hot-iron disbudding (the only legal method for disbudding in Finland), means that calf horn bud tissue is destroyed by burning with a heated metal bar with a concave tip. The very hot (approximately 600°C) metal burns the horn bud and surrounding tissue. The procedure is extremely painful to the calves (Graf & Senn 1999; Grøndahl-Nielsen et al. 1999; Heinrich et al. 2010) and the pain can persist for several days (Theurer et al. 2012).

Pain impacts substantially on animal welfare: the greater the pain the poorer the welfare (Broom 1991). Pain has been