

Goat kids are not small calves: Species comparisons in relation to disbudding

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Abstract

Limited scientific literature is available for developing ‘best practice’ guidelines for the management of dairy goats (*Capra hircus*), particularly goat kids. Disbudding practices for kids and calves appear to be similar; however, it is important to recognise that kids are not small calves. Disbudding causes pain and is performed on calves and kids — welfare concerns surrounding disbudding affect both industries. In this review, we evaluate literature on disbudding of kids and calves and compare methodologies across the two species. In addition, we catalogue behavioural and physiological responses to disbudding and, finally, review alternatives to disbudding (or refinements). Although there may be certain similarities between the response of goat kids and calves to cautery disbudding, it is important to highlight the differences that do exist between the species to reduce the risk of potential detrimental effects (eg brain injury). Cautery disbudding is the most common and efficacious method of disbudding kids and calves; however, kids have thinner skulls and are disbudded at a younger age, which can increase the risk of thermal injury to the brain. Kids and calves show behavioural and physiological responses indicative of pain; however, variability in these responses between studies are likely due to differences in disbudding methodologies, study design and within-species variation. Effective pain mitigation strategies may differ across species; therefore, future research is needed to optimise pain mitigation strategies for kids. Currently, alternatives to cautery disbudding including: (i) selection for polled animals; (ii) managing horned animals; or (iii) the development of novel disbudding methods (eg cryosurgery, clove oil injection) have been deemed unsuitable by the industries as the methods are either impracticable or ineffective. Therefore, if disbudding is to continue, species-appropriate pain mitigation strategies need to be refined. Establishing best practice guidelines for disbudding kids requires managers to recognise that they are not small calves.

Keywords: animal welfare, calves, dehorning, disbudding, goat kids, pain mitigation