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November 14, 2024

The American Association of Bovine Practitioners
1130 East Main Street, Ste. 302
Ashland, Ohio 44805

Dear Members of the Review Committee,

Thank you for the opportunity to provide comments for the American Association of Bovine Practitioners (AABP) Dehorning Guidelines.

The Veterinary Association for Farm Animal Welfare (VAFAW) is a 501(c)(3) nonprofit organization that advocates for animals used in food and fiber production by providing a veterinary perspective grounded in animal welfare science and ethics. One of our primary campaigns focuses on the prevention and mitigation of pain in farm animals. VAFAW aims to improve pain management strategies through education, policy development, advocacy, and collaborative animal care. We view veterinary-driven guidelines for painful procedures as key to advancing this goal.

Like AABP, VAFAW recognizes that disbudding and dehorning are performed to protect human safety and animal welfare by preventing injuries caused by horns. U.S. dairies and feedlots are predominantly designed for cattle without horns, and research and guidelines on facility design and management strategies for horned herds are scarce.^{1,2} VAFAW considers pain management for disbudding and dehorning to be a short-term strategy for improving animal welfare, emphasizing that we must invest in long-term solutions, such as selection for polled genetics, to preclude the need for this painful procedure. The recommendations below are intended to enhance animal welfare within the current systems until alternative solutions become widely accessible.

Cautery and chemical disbudding result in thermal and chemical third-degree burns, respectively. Both methods cause acute procedural and long-lasting post-procedural pain.³ VAFAW supports AABP's acknowledgment that "[a]ll methods of disbudding and dehorning cause pain" and the recommendation

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that local anesthesia and systemic pain relief should be provided as the standard of care to address both acute and prolonged inflammatory pain. There is substantial evidence that disbudding results in physiological, neuroendocrine, and behavioral changes in calves indicative of pain,⁴ as well as a negative affective state.^{5,6,7,8,9,10} Furthermore, there is evidence that unabated pain experienced early in life may result in the development of pathologic pain and long-lasting negative welfare consequences, such as impaired cognition, social development, and stress resiliency.^{11,12,13} Thus, adequate pain relief *throughout the healing process* is critical to safeguarding the present and future welfare of calves that undergo disbudding.

Current scientific research indicates that the process of re-epithelialization may take 9 weeks following cautery disbudding¹⁴ and 15 weeks following chemical disbudding,¹⁵ and the regions of healing tissue remain sensitive throughout this period. However, the current AABP Dehorning Guidelines only mention the use of NSAIDs in the “immediate post-operative period.” As stated in the guidelines, oral meloxicam – an NSAID commonly administered prior to disbudding – only provides pain relief for up to 48 hours.¹⁶ Other NSAIDs such as flunixin meglumine demonstrate significantly shorter durations of pharmaceutical activity,¹⁷ indicating that a single NSAID dose is insufficient for the management of post-procedural pain. VFAFW urges AABP to acknowledge the prolonged pain associated with disbudding and to encourage a multiple dosing protocol in their updated guidelines to more adequately address pain throughout the healing process. VFAFW recommends that the Veterinarian of Record counsel clients on safe multiple dosing protocols to maximize pain management beyond the immediate post-procedural period.

The guidelines currently focus on age as the primary determinant of appropriate disbudding timing, stating that it “should be performed by 8 weeks of age.” The goal of early disbudding is to minimize tissue damage and consequent pain by targeting the horn bud when it is very small. According to the literature, age is not a clear indicator of horn bud size; there are variations based on breed and sex.¹⁸ Thus, horn bud size, rather than calf age, is likely a more important factor in determining recommendations for disbudding to protect calf welfare. We therefore urge AABP to recommend disbudding as soon as the horn bud becomes visible or palpable to minimize tissue damage.¹⁹ The horn bud typically has a significant diameter and height by 8 weeks, indicating that this procedure should be performed far in advance of this time.

Currently, AABP states that disbudding is “preferred” over dehorning. We urge AABP to take a stronger stance against dehorning and reserve its use for “extenuating circumstances” only, as dehorning is a surgical amputation causing significantly greater tissue damage and post-inflammatory pain. Dehorning also introduces significant health risks, including sinusitis, hemorrhage, protracted healing, and infection, which may lead to greater

antibiotic use.²⁰ AABP currently recommends that dehorning be “performed as early as the management system allows.” Although VFAFW recognizes that early disbudding may interfere with long-standing practices of many beef operations, we urge AABP to focus on promoting alternative management strategies, housing designs that facilitate early disbudding, and the use of polled genetics to preclude the need for this invasive surgical procedure.

In the case of extenuating circumstances in which late disbudding (i.e., disbudding performed after 4 weeks of age) or dehorning occurs, VFAFW encourages AABP to state that a licensed veterinarian must perform this procedure. Administration of an effective local anesthetic is more challenging with a larger animal and a more developed horn bud, even if skull attachment has not yet occurred. VFAFW further encourages the addition of sedatives with analgesic and anxiolytic properties to the pain management protocol to ease stockperson handling and reduce animal stress.²¹ VFAFW advises that the updated guidelines state that sedation should always be considered in cases where it will likely benefit the animal. However, VFAFW maintains that sedatives are not a replacement for appropriate handling, restraint, or use of local anesthetics.

Lastly, VFAFW encourages the updated guidelines to include the importance of stockperson training not only in appropriate animal handling but also in local anesthetic administration and pain recognition. Producers should be trained to perform a local block by their Veterinarian of Record, as technical errors such as inadvertent injection of the anesthetic into retrobulbar fat tissue or surrounding muscle may result in anesthetic failure.²² The cornual nerve block, even when performed by a trained professional, does not have guaranteed efficacy due to biological variations among calves and secondary innervation that may account for an ineffective nerve block.²³ Therefore, recognition of pain is critical to ensure that secondary measures are taken if the initial block is ineffective.

In conclusion, our recommendations aim to advance animal welfare first and foremost. However, we also recognize that pain control in farm animals is critical to securing public trust in both the veterinary profession and the dairy and beef industries. Surveys demonstrate that the public expresses concern regarding pain in farm animals, with more than 80% of consumers agreeing that analgesia should be used for painful procedures.^{24,25}

To safeguard animal welfare and public confidence in the veterinary profession, VFAFW recommends:

- **Multiple dosing protocols for systemic pain relief**
- **Dehorning reserved for extenuating circumstances only**

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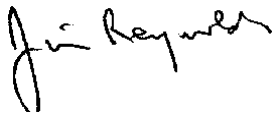
- **Time of disbudding based on when the horn bud first becomes visible and palpable**
- **The integration of sedation/analgesia into the management protocol in cases that benefit the animal**
- **Training of stockpersons by a licensed veterinarian in both pain recognition and administration of local anesthetics**
- **Long-term solutions that preclude the need for disbudding such as selection for polled genetics**

Thank you for the careful consideration of these comments. If AABP has any questions or if VAAFW can be of further assistance, please contact me at jimrey@pacbell.net.

Respectfully submitted,



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