DEHORNING GUIDELINES

Dehorning cattle reduces the risk of injury to the animal, other cattle and people and, during transportation to slaughter facilities, reduces bruising of carcasses. This guideline from the American Association of Bovine Practitioners (AABP) serves to assist veterinarians and producers with enhancing the welfare of their client's cattle by providing guidance related to dehorning of calves on beef and dairy operations. Essential to this process is that consultation occur between the Veterinarian of Record and the client regarding age at dehorning, dehorning techniques, and pain mitigation strategies that are appropriate for each operation. The use of written, herd-specific protocols to document these discussions is encouraged. Such protocols should be reviewed on a regular basis.

AGE

Ideally, dehorning is completed when the calf is young and should be performed at the youngest age possible. Disbudding, which involves the removal or destruction of the horn-producing corium in young calves, is preferred over dehorning if it can be performed within the management system. Disbudding is achievable prior to two weeks of age and may be performed as early as the first 24 hours of life. Dehorning is considered a more painful procedure with longer healing time, as the horns are removed after the horn-producing corium has attached to the skull. In dairy operations where calves are handled daily, disbudding or dehorning should be performed by 8 weeks of age. In open range beef operations, dehorning should be performed as early as the management system allows. Accomplishing dehorning prior to 3 months of age or the first practical opportunity after 3 months of age is encouraged. This age will vary between production systems and should be based on recommendations of the Veterinarian of Record and discussions with farm/ranch management. The added stress that occurs with increased age at dehorning should be considered. It is critical that producers work with their Veterinarian of Record to ensure appropriate procedures are in place to promote healing and minimize pain.

RESTRAINT

Calves should be restrained for dehorning in a way that minimizes stress and the risk of injury to the animal and the operator. Chemical restraint (sedation) may be used to minimize stress and increase ease of handling. It is important to note that some sedatives do not have analgesic properties and the use of sedation may not eliminate the need for other pain management strategies. Federal law restricts sedatives to use by or on the order of a licensed veterinarian. Employees should be trained on safe, low stress handling and be provided the time and resources necessary to achieve this type of handling. The use of a squeeze chute, tilt table, calf cart or halter may accomplish proper head restraint. The application of local anesthetics to minimize the need for excessive restraint should be utilized.

METHOD

The Veterinarian of Record should work with the producer to develop written protocols for disbudding or dehorning that work best within their farm management system. Acceptable methods for disbudding include application of caustic paste or an electric/gas iron to destroy the horn producing corium. The use of caustic paste is less effective and discouraged after the calf is 2 weeks of age and ideally should be applied within the first few days of life. Detailed instructions for the application are available.[1]

Larger horns may require mechanical removal. A protocol should be in place for managing wounds that are the result of using mechanical dehorning devices, which would include control of infection, pain and fly control. Dehorning at the earliest age possible within the management system mitigates the need for gouge dehorning

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in most circumstances. The use of elastic banders in animals with well-developed horns is not recommended due to increased rates of failure, increased pain and delayed healing.[2]

Producers of breeds with access to polled sires should be encouraged to incorporate polled genetics into their herds, as genomics and selection make this a viable option for the future with many dairy breeds. The National Animal Health Monitoring (NAHMS) Beef 2017 Cow-Calf Study reports that only 7.8% of beef cattle in the US are horned, improved from 27.8% horned in 1997 and 12.4% in the 2007-2008 survey

PAIN MANAGEMENT

All methods of disbudding and dehorning cause pain. AABP recommends that pain management be considered the standard of care during all dehorning and disbudding procedures. Producers are encouraged to work with their Veterinarian of Record, who is best able to develop the most appropriate, individualized pain management protocol for their operation. Scientific evidence supports that it is possible to enhance animal welfare associated with these necessary procedures with the implementation of pain management protocols.

Local Anesthesia

Use of a local anesthetic mitigates the immediate pain associated with disbudding and dehorning and provides up to five hours of post-procedural analgesia. There are a variety of local anesthetic techniques including a cornual nerve block or horn bud infiltration. The local anesthetic protocol should be determined and prescribed by the Veterinarian of Record. Federal law restricts the use of local anesthetics to use by or on the order of a licensed veterinarian.

Systemic Pain Relief

The use of non-steroidal anti-inflammatory drugs (NSAIDs) should be used to provide additional and longer lasting pain relief. The use of injectable, topical or oral NSAIDs are acceptable for pain mitigation in the immediate post-operative period. Meloxicam has been shown to mitigate post-procedure pain for up to 48 hours after a single dose of the drug.[3] Topical NSAID applications make the administration of NSAID therapy at the time of disbudding or dehorning practical in most instances when oral, IV or IM administration is difficult although further study is warranted to determine its effectiveness in mitigating dehorning pain.[4] The type of NSAID used should be prescribed by the Veterinarian of Record. There are currently no approved drugs in the United States for use in cattle with an indication to provide analgesia associated with dehorning pain. AMDUCA regulations allow extra-label drug use provided a valid Veterinarian-Client-Patient Relationship exists and the drug selection process, records and withholding times outlined in the AMDUCA regulations are followed.

DEFINITIONS

- *Analgesia: Alleviation of pain, patient is alert.*[5]
- *Anesthesia: Without sensation, patient is asleep and cannot be awakened, amnesia, and loss of reflexes.*[5]
- *Dehorning: Removal of the horns and horn-producing corium after the horns have formed and are attached to the skull.*[6]
- *Disbudding: Removal or destruction of the horn producing corium in young calves. At this age the horn buds are free-floating and not attached to the skull.*[6]
- *Sedation: Slight depression, patient is awake.*[5]

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