

# What's the best method to reduce calf disbudding pain?

U of G researchers find sedative may help reduce indicators of disbudding pain

By Kathryn Kroeze

University of Guelph researchers have found that a particular veterinary sedative may reduce indicators of pain during calf disbudding.

Dr. Charlotte Winder, professor in the Department of Population Medicine, and recent PhD graduate Cassandra Reedman have found that xylazine reduces behavioural indicators of pain in calves when used along with local anesthetic and non-steroidal anti-inflammatory (NSAID) pain-relievers.

“Essentially all dairy calves in North America are born with horn buds,” says Reedman. “Horns can pose an injury risk to the animals and the people working with the calves, which is why disbudding is a crucial step in the management of dairy cattle.”

Disbudding usually happens before six weeks of age as the horn-producing cells begin to grow. There are two common methods of disbudding: caustic paste (chemical burn) or cauterizing iron (thermal burn). These work by destroying the horn buds, which prevents any future horn growth.

In 2020, researchers carried out the study with two groups of calves at the Ontario Dairy Research Centre in Elora, Ont. Reedman sedated one group of calves with xylazine and left the other group untreated. Both groups received lidocaine nerve blocks and the NSAID meloxicam. Disbudding was done with a cauterizing iron for both groups.

After the procedure, the sedated calves showed more play behaviours and were less sensitive than



Disbudding is done to prevent horns from growing in. Once horns have grown, they can cause injury to other animals and their human caretakers.

Having horns can also make movement through the barn trickier for cows, as feed, water and milking stations may not have the extra space required.

their non-sedated counterparts. However, some results examining milk drinking behaviour suggested that the sedative had a hangover effect lasting up to 48 hours following the procedure.

More research is needed to determine if the positive benefits of sedation outweigh the possible negative consequences in feeding behaviour. Discretion over xylazine use should be left up to the farmer in consultation with their veterinary practitioner.

“Since disbudding is essential to safety in dairy cattle management, our research has pointed out a need for further work to be done to optimize calf welfare when disbudding with a cauterizing iron,” says Reedman.

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