

# Improving health and welfare of dairy calves

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## Development of a pasting applicator

Can we make disbudding with caustic paste:

- SAFER for calves
- SAFER for employees
- more CONSISTENT
- more TIME efficient

Currently, we are continuing prototype development:

- Researching adhesive
- Horn bud placement
- Volume of paste.



## Evaluating different levels and brands of caustic paste

Collaborators: Dr. Kate Creutzinger, Dr. Charlotte Windner, Cassie Reedman.

There are two brands of caustic paste on the market.

- For each brand, how much paste should be used to effectively disbud?
- What are differences in wound size and healing time between brands?
- Are there any differences in pain behaviors between brands?

Ultimately, can we provide a more accurate recommendation for using caustic paste to disbud dairy calves?



## Effects of oral stimulation on pain behaviors in dairy calves

Collaborators: Dr. Kurt Vogel  
Students: Kailey Wichman, Samantha Leicht, Rachel Weber, Liz Bekkers, Kirsten Clark, Teagan Turba.  
Thanks to our research farms, Luckwaldt and Brandvale!

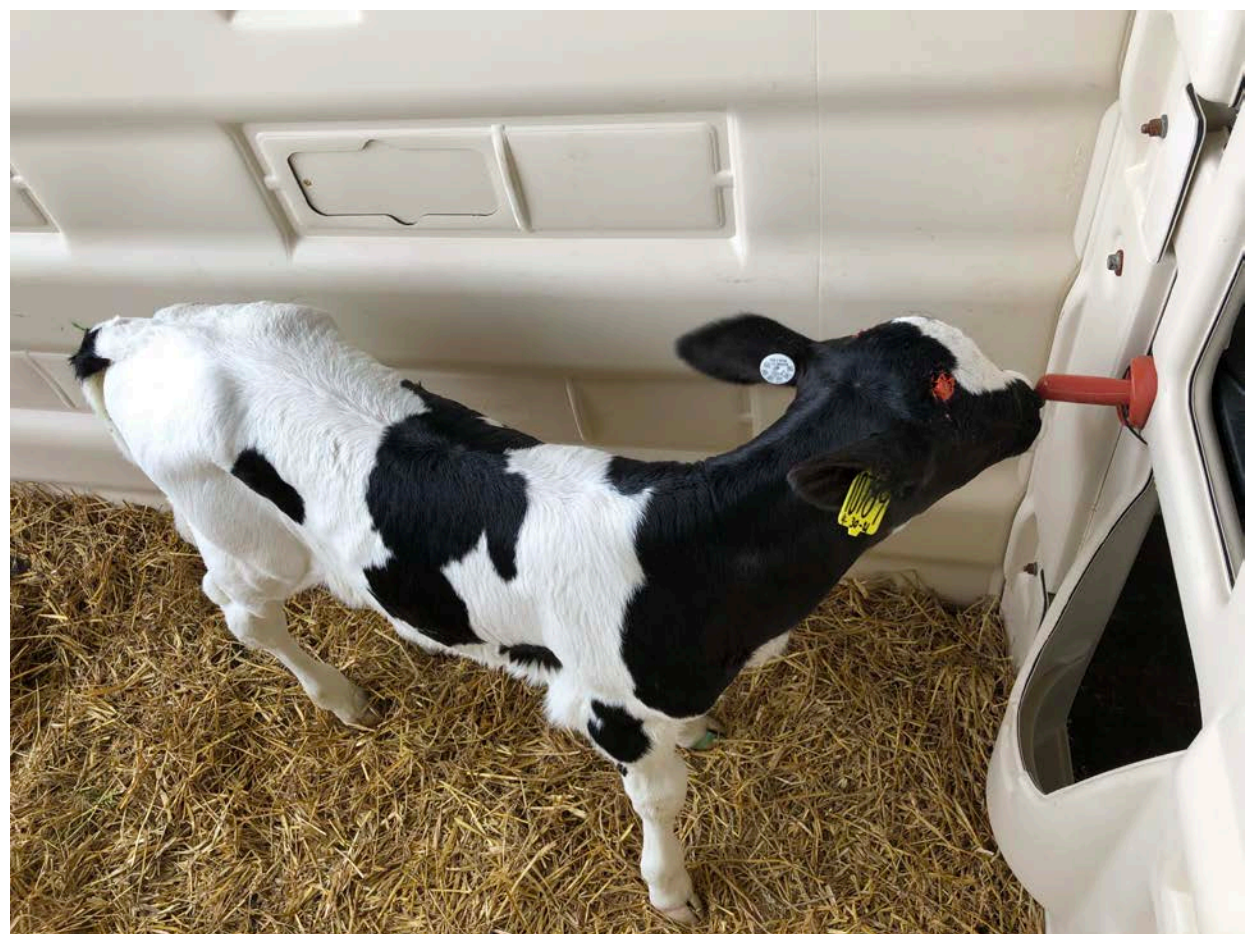
Will providing a nipple in the pen allow calves to alleviate their pain after paste disbudding?

- Pasted with available pacifier
- Pasted with no pacifier
- Sham pasted with available pacifier
- Sham pasted with no pacifier

Continuous video recording for 4hrs after pasting.  
Motion sensitive video recording for 2 wks focused on nipple use.

Currently: Live animal work has been completed.  
Video data is currently being evaluated and analyzed.

Future: submit manuscript to Journal of Dairy Science Communications.  
submit recommendations to farmers through Hoards Dairyman



## A comparison of pH and elements within blood and urine in calves.

Students: Rileigh Powers and Taylor Rauenhorst

Metabolic acidosis is common in 2-3 week old calves. Can we detect the problem using urine, which is more accessible for the farmer, rather than a blood sample?

Currently: Purchasing an on-farm blood gas analyzer.

Future: find a correlation between levels of pH, pCO<sub>2</sub>, pO<sub>2</sub>, HCO<sub>3</sub>, and base excess within blood and urine of calves under 3 weeks of age.

- Test blood and urine samples at wk 1, 2, and 3 for 25 calves.
- Evaluate correlation of components between blood and urine.
- Determine whether a urine test can be useful of detection of metabolic acidosis in dairy calves younger than 3 weeks of age.



## Renovation of the UWRF Dairy calf barn

Our calf barn was only able to house up to 15 heifer dairy calves at a time. With the new renovation, we are able to house up to 42 heifer and bull calves.

We also renovated an old swine housing facility to house weaned dairy calves. These heifers will continue on to our lactating dairy herd and the bulls will be used for steer research.

