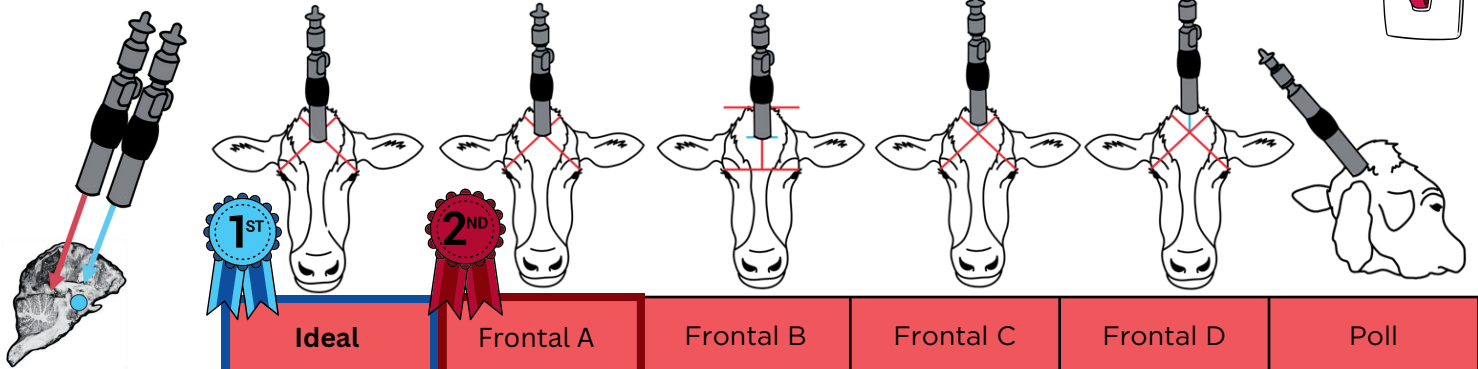


STUN PLACEMENT FOR DAIRY COWS

Penetrating captive bolt is commonly used to stun or euthanize dairy cows

There are many recommended placements, not all have been evaluated

The thalamus is part of the brain that acts as an on/off switch for consciousness

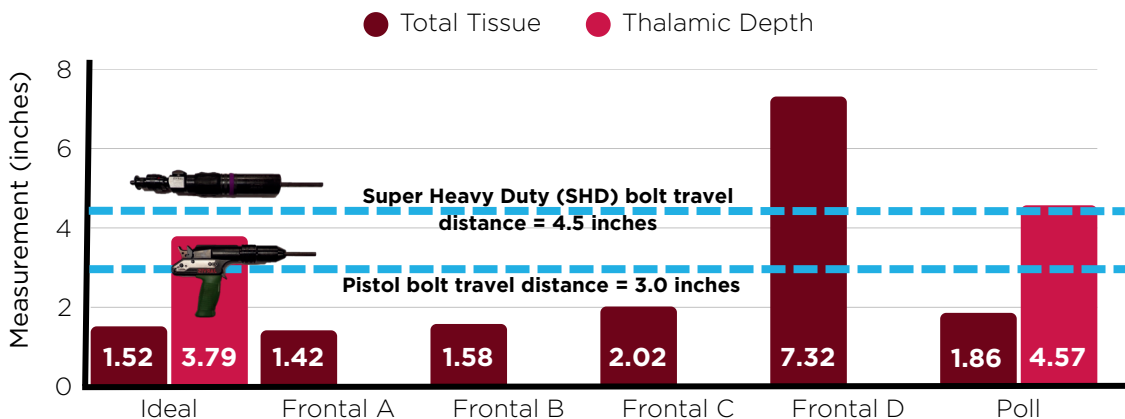


	Ideal	Frontal A	Frontal B	Frontal C	Frontal D	Poll
Description	Approx. 0.4 inches below Frontal A (determined based on thalamic location)	Intersection of 2 lines from the outer corner of the eye to the center of the opposite horn, or equivalent position in polled animals	At the midline, halfway between the top of the poll and a line connecting the outer corners of the eyes	Approx. 1 inch above Frontal A	Approx. 2 inches above Frontal A	Just below the crest of the head at the midline, directed toward the bottom of the front teeth
Potential for Brain Contact	100% (16/16)	100% (22/22)	100% (22/22)	100% (22/22)	54.5% (12/22)	100% (22/22)
Potential for Thalamic Contact	100% (16/16)	93.8% (15/16)	0% (0/16)	0% (0/16)	0% (0/16)	62.5% (10/16)

Total tissue thickness = distance from the hide to the outer surface of the brain.

Thalamic depth = distance to the thalamus, which is located near the middle of the brain.

Expected Tissue Depth for 97.5% of Dairy Cows



KEY TAKEAWAY!

The SHD captive bolt is recommended because it can reach the thalamus at the Ideal location. The Pistol is **NOT** appropriate for dairy cows because it cannot reach the thalamus at the Ideal placement.

Anderson, K. N., R. Woiwode, E. M. Hamilton, A. A. Kirk, M. J. Cowell, A. A. Reyes, P. E. Zhitnitskiy, and K. D. Vogel. 2025. J. Dairy Sci. Relationship between captive bolt placement, tissue parameters, and brain contact in cadaver heads from culled Holstein cows > 30 mos of age. doi: 10.3168/jds.2025-26338

Infographic made by Ashlynn Kirk and Karly Anderson