

Keep Calm & Moo On!



Examining novel and acute stressors in cattle



Our species only takes a few seconds to excite but it takes 20 to 30 mins to us calm down [1].



Interacting with Cattle & Their Senses



Visual Interactions

- Although cows can see 330° around them, they do have a 15° blind spot right behind them so make sure they can see you at all times [2]
- They will attempt to hide in dimly lit places when panicked so be sure to check in dark places if missing count of any cattle [2].



Auditory Interactions

- Cows have a more sensitive hearing spectrum, meaning they may react to noises that humans normally would not react to [2].
- Avoid loud yelling or shouting in order to get the attention of a cow or a herd of cows [2].
- When using equipment or machines, avoid loud clanging noises when near cattle [2].
- They respond very negatively to these and may even view these noisy sounds as negatively as physical beatings [2].

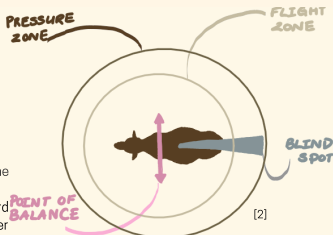
Cattle Flight & Pressure Zones

Pressure Zone: To stay in contact with the cow [2].

- To be noticed by the cow, stand on the outside of the pressure zone [2].
- Look for the cow signals such as head raises or ear movements that indicate you are noticed [2].

Point of Balance: Located at the cow's shoulder [2].

- To get a cow to move forward position yourself at their shoulder [2].
- Cows are more inclined to turn right so approach from the left and stay on the left side of the cow's shoulder to avoid injuries due to sudden moments or turns [2].



Flight Zone: Think of it as their personal bubble [2].

- To make them feel safe and to get a cow to stay put, stay outside of their flight zone [2].
- To get the cow to move away, enter the flight zone [2].

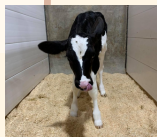
Blind Spot: spans on either side of their tail [2].

- Avoid standing here [2]!
- The cow will not see you and can abruptly turn or halt [2].

Behavioural Assessments

Signs of a stressed cow

- kicking [3]
- pacing [4]
- increased licking [4]
- Increased sniffing [4]
- Increased vocalization [3] [4] [5]
- balking (hold back) [6]



Signs of a calm cow

- decreased vocalization [3]
- neck down [6]
- tail hanging down [6]
- Increased time spent standing [4]



References

- [1] Grandin, T. (1997). Assessment of stress during handling and transport. *Journal of Animal Science*, 75(1), 249. <https://doi.org/10.2527/1997.751249v>.
- [2] Kamel, D. W., Bardi, K., & Lewis, J. (2019). Design and management of proper handling systems for dairy cows. *Veterinary Clinics of North America: Food Animal Practice*, 35(2), 195-227. <https://doi.org/10.1016/j.cfsa.2018.11.003>.
- [3] Herkin, M. S., Kristensen, A. M., & Munksgaard, L. (2004). Behavioural responses of dairy cows toward novel stimuli presented in the home environment. *Applied Animal Behaviour Science*, 89(1-2), 27-40. <https://doi.org/10.1016/j.applanim.2004.06.006>.
- [4] Mackay, J. R. D., Haskell, M. J., Daag, J. M., & Reenan, K. Van. (2014). Fear responses to novelty in testing environments are related to day-to-day activity in the home environment in dairy cattle. *Applied Animal Behaviour Science*, 152, 7-16. <https://doi.org/10.1016/j.applanim.2013.12.008>.
- [5] Chen, Y., Aramank, R., Nepper, S., & Diebel, P. (2015). Models and methods to investigate acute stress responses in cattle. *Animals*, 5(4), 1268-1295. <http://doi.org/10.3390/ani5040411>.
- [6] Wilson, D. W., Baw, F. S., & Grandin, T. (2022). An observational field study on the effects of changes in shadow contrasts and noise on cattle movement in a small abattoir. *Meat Science*, 179(March), 108539. <https://doi.org/10.1016/j.meatsci.2021.108539>.