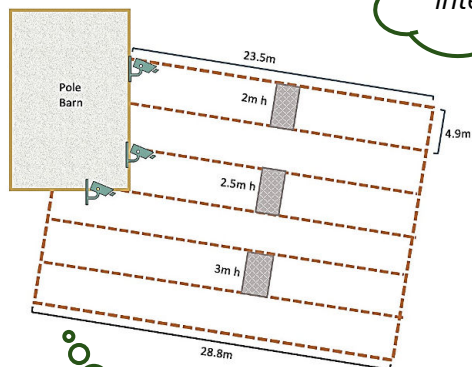# CattleTracker™ - Research Behind a Cattle-Compatible PV Design – *how do cattle interact with a mock-up system?*
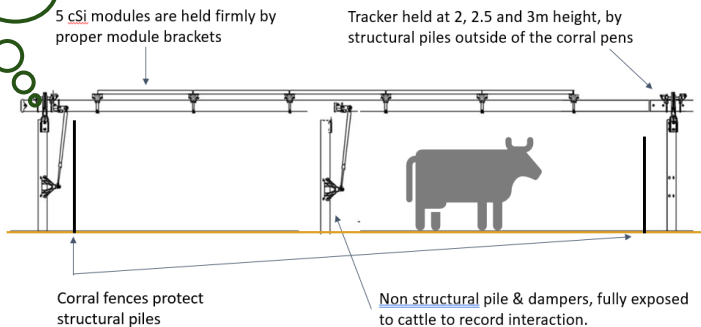
THE STUDY SITE

Pole Barn

23.5m

2m h

4.9m

2.5m h

3m h

28.8m

What part of the structure do they interact with?

2 m, 2.5 m or 3 m
Is there a difference?

THE STRUCTURE

5 cSi modules are held firmly by proper module brackets

Tracker held at 2, 2.5 and 3m height, by structural piles outside of the corral pens

Corral fences protect structural piles

Non structural pile & dampers, fully exposed to cattle to record interaction.

THE DESIGN

1 Height
1 group
6 cattle
2 days
3 time periods (AM, mid, PM)

THE ANIMALS

A total of 144 animals
(1/2 bulls, 1/2 yearlings

Bulls and Yearlings
Do they act differently??
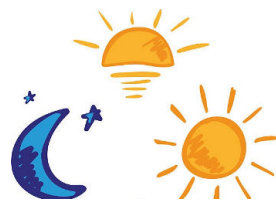
1st day or 2nd day
What happens over time?

THE MEASUREMENTS

What did interactions with the PV structure look like?
Where, with what, and how much?

Head / Neck

Mid-Section

Back / Rump

Nose / Mouth
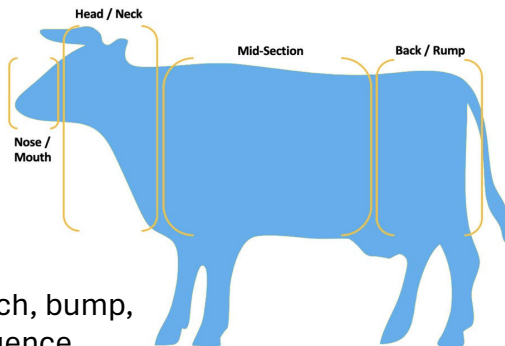
Intensity:
1 = low intensity touch or accidental bump
2 = medium intensity touch, bump, scratch or repetitive sequence
3 = high intensity rub, heat butt, hard scratch or destructive play

The video equipment set up

Lily Edwards-Callaway, Colorado State University
Department of Animal Sciences