

Comfy cows



6 principles of cubicle design

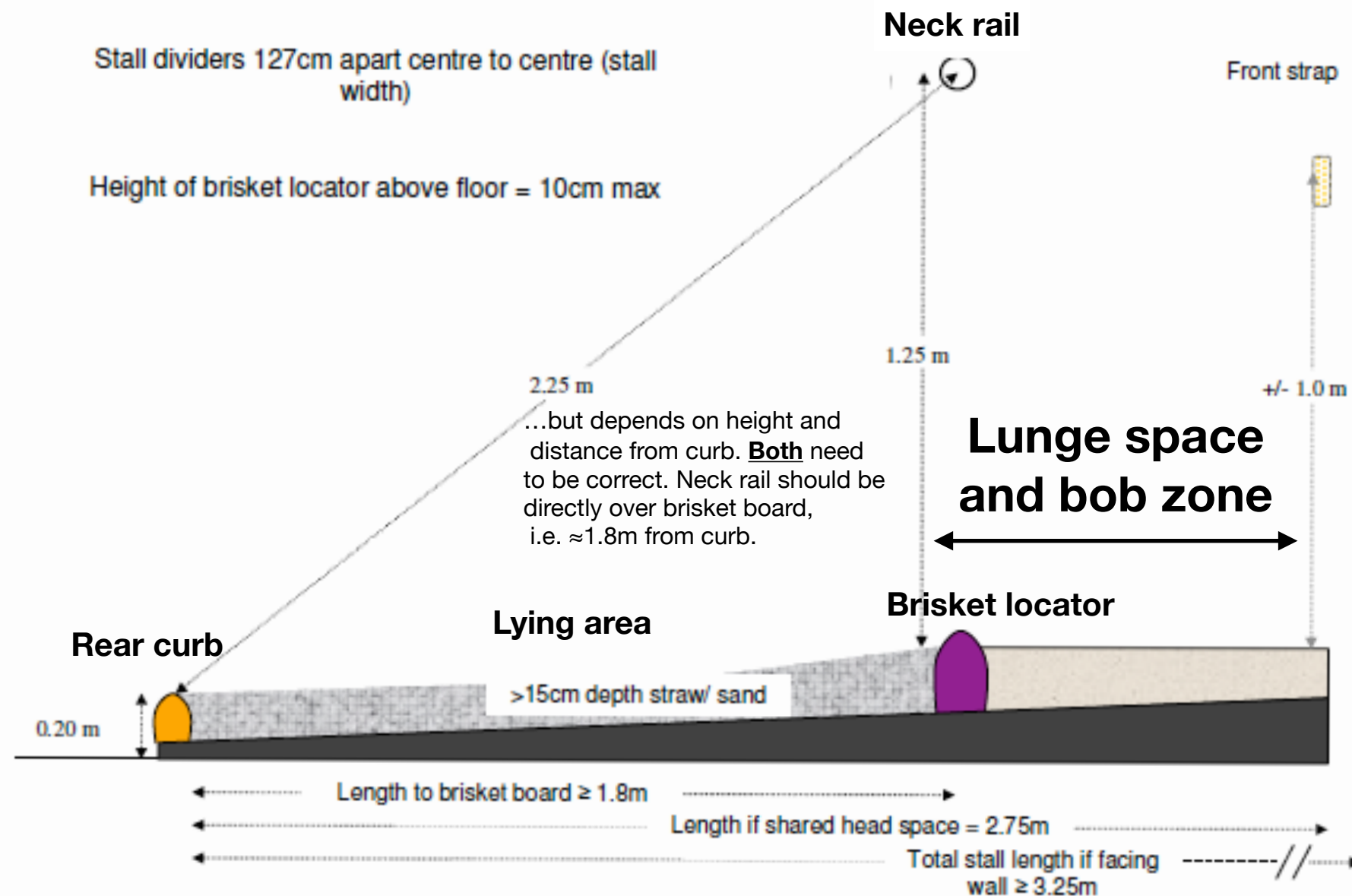
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Six things to check for cubicle comfort

Cubicle dimension guide for a 700 kg Holstein cow:



Cubicles: 6 Principles

**** Surface is the most important thing ****

I: Lying Surface Must be SOFT and GRIPPY



More bedding = longer lying times

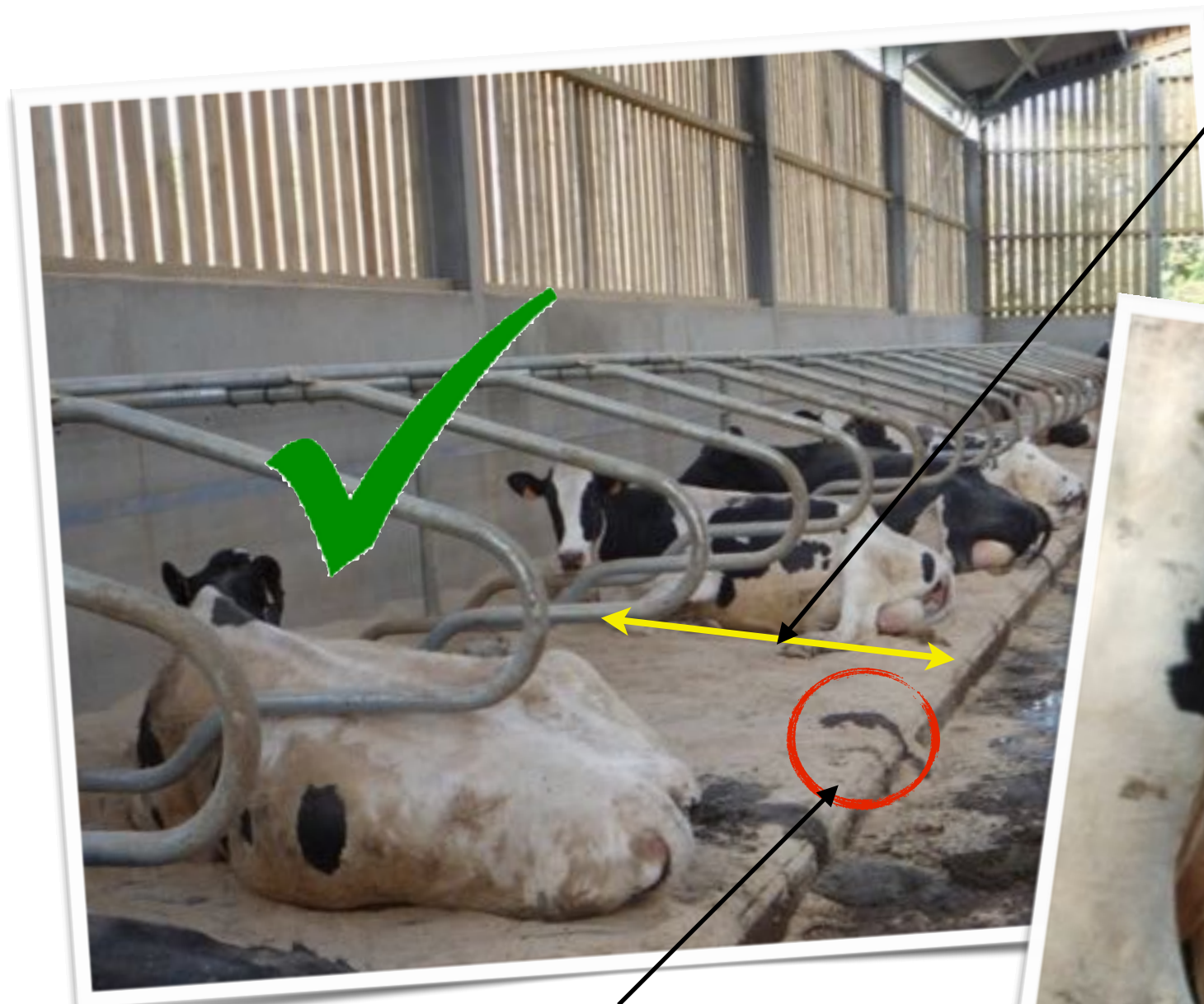
Deep beds
are best.

Deep sand
is great.

Cubicles: 6 Principles

2: Bed Length

Must allow straight lying without overhanging the curb



Holsteins - lying area should be at least 1.8 m long (curb to brisket locator)

These beds will have no muck on the back of them - but that's a bad sign!



10% of cubicles with muck is probably OK/ realistic. Don't stress! Better to have comfy beds than pristine beds.

Cubicles: 6 Principles

3: Unobtrusive Neck Rail

Must allow cow to stand squarely in stall AND rise without hindrance

Holsteins: Height = 1.25 - 1.3 m
1.8 m forward from curb



The position can be wrong in two possible dimensions. In this case it is too low, and not far enough forwards



This neck rail was too low, so the farmer raised it

Cubicles: 6 Principles

4: Brisket Locator

Must position cow correctly but be low enough to step over



No brisket locator and the cows will lie too far forwards



Boards like this are a killer

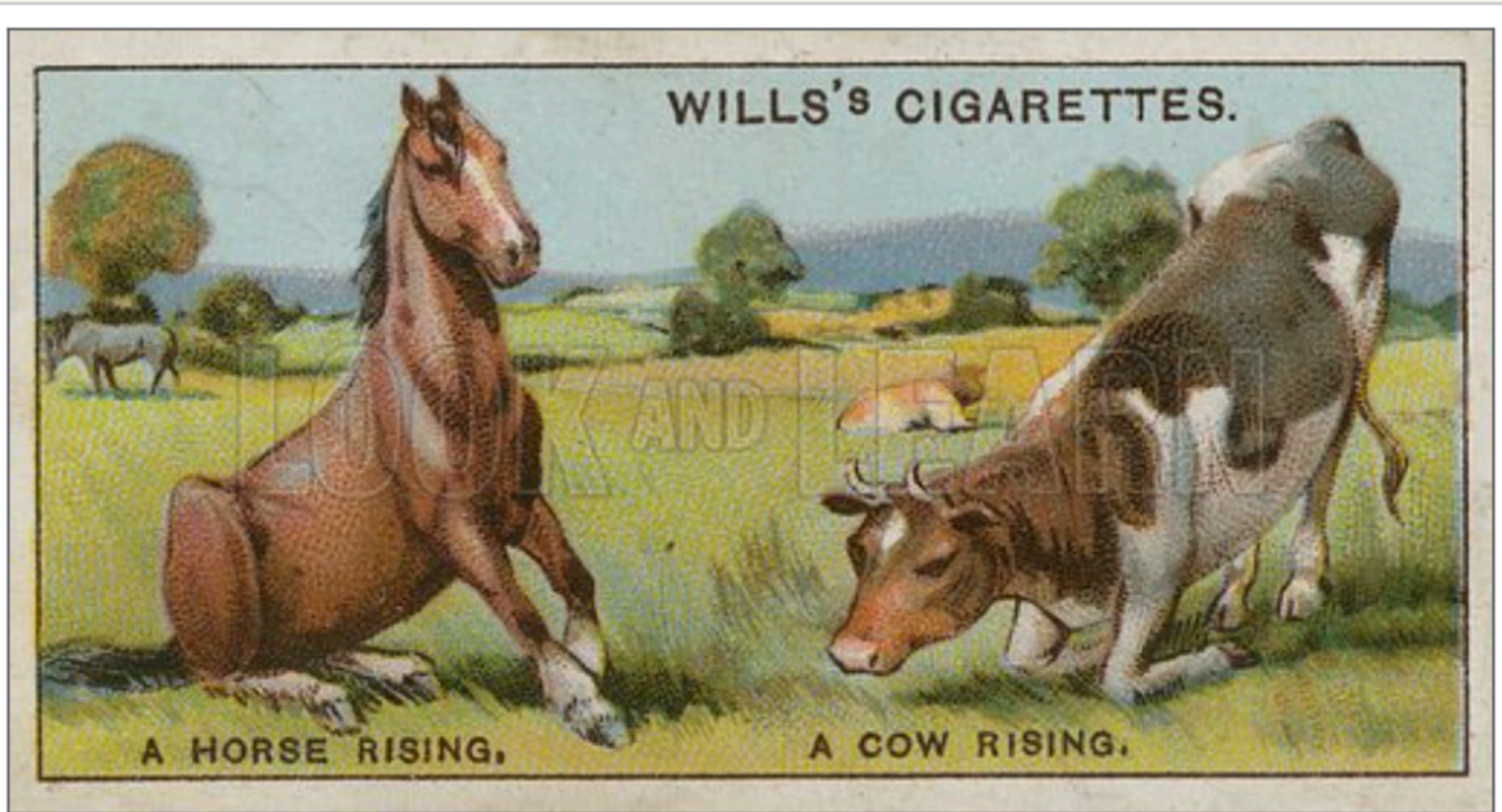


A nice brisket locator allows cows to lie with a leg over the front. No more than 4" high. Cows always want to put a foot forwards when getting up - at least they will if they can!

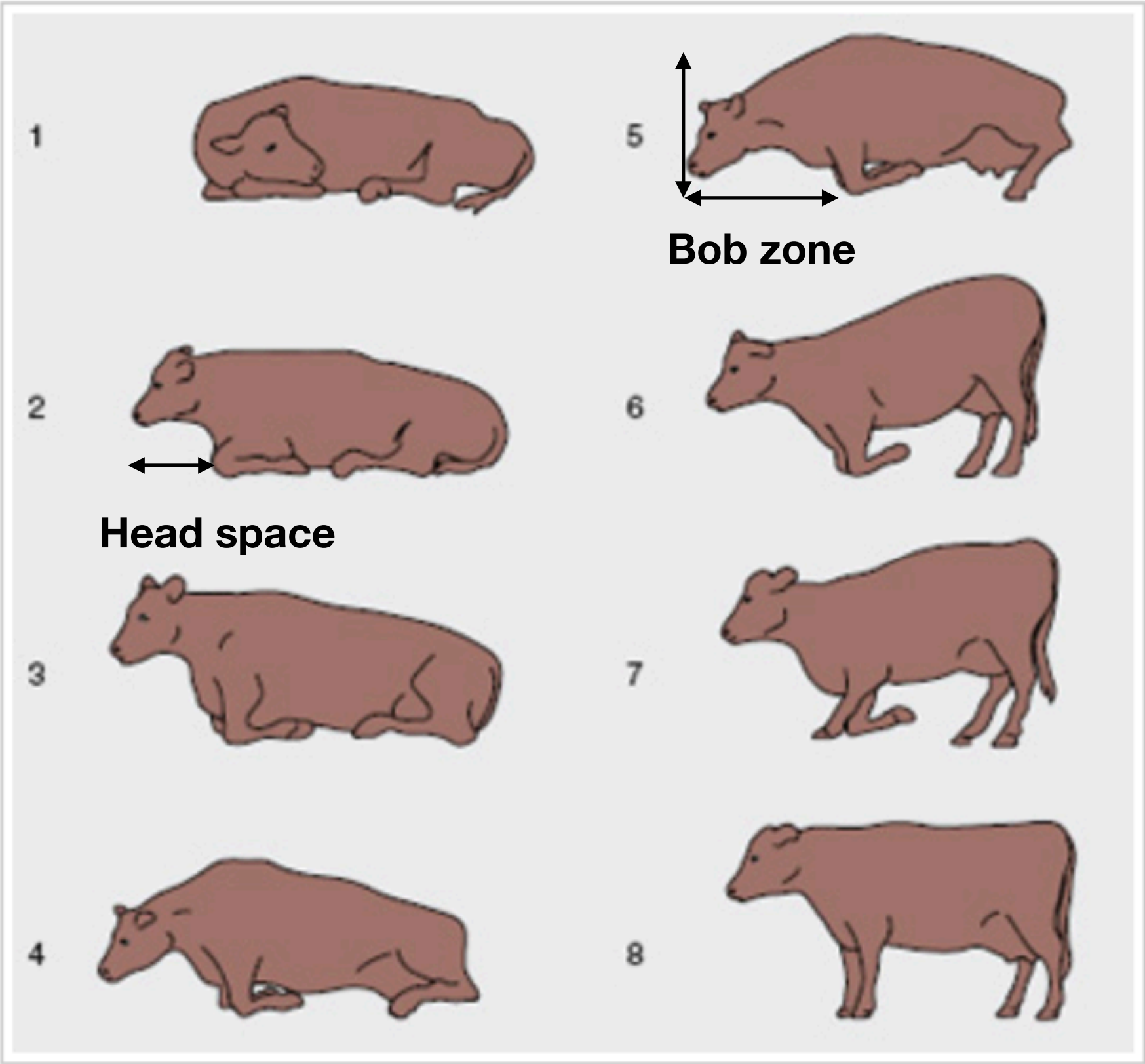
Cubicles: 6 Principles

5: Head space, lunge room and “bob” zone

Must allow straight neck (for comfort and cuddling). Must allow lunge room to get up and no obstructions in bob zone



HOW A COW STANDS UP



Source (adapted from): *Anon. Housing design for cattle, DACC.*

Cubicles: 6 Principles

5: Head space, lunge room and “bob” zone

Must allow straight neck (for comfort and cudding). Must allow lunge room to get up and no obstructions in bob zone



Open up fronts and good bob zones are easy to achieve. (Not against a wall)



Watch head-to-heads: it is common to have restricted (shared) bob space. Cows will lie diagonally and you will get dirty beds.

Bottom rail bars are a nasty obstruction.



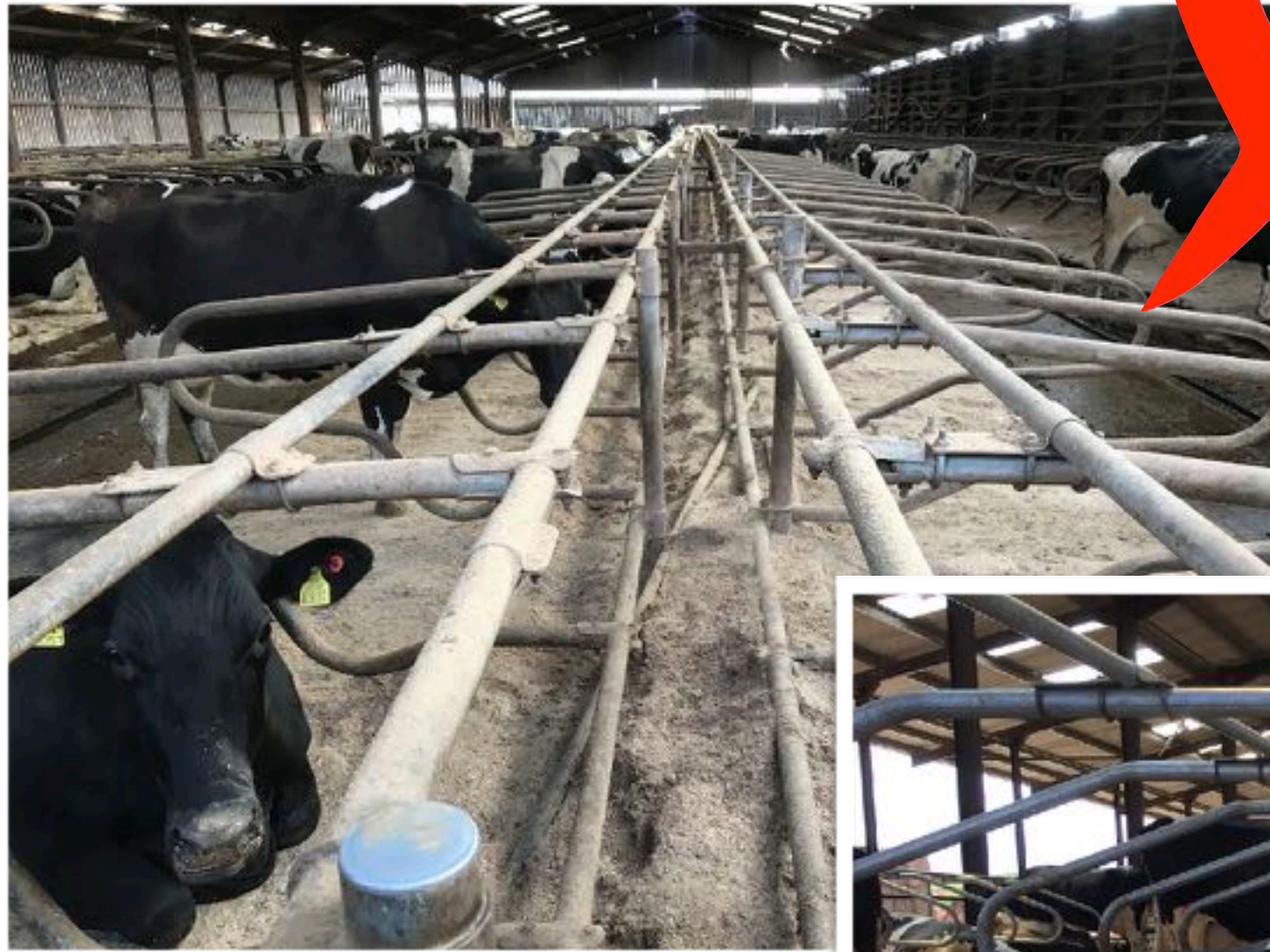
6' or 1.8m is ideal (between brisket locators). This means 18 foot (5.5m) curb-to-curb. 17 foot minimum.

Some simple modifications to create head space:



Take out all walls at the front - please!





**Cantilever design
(adjustable width)**

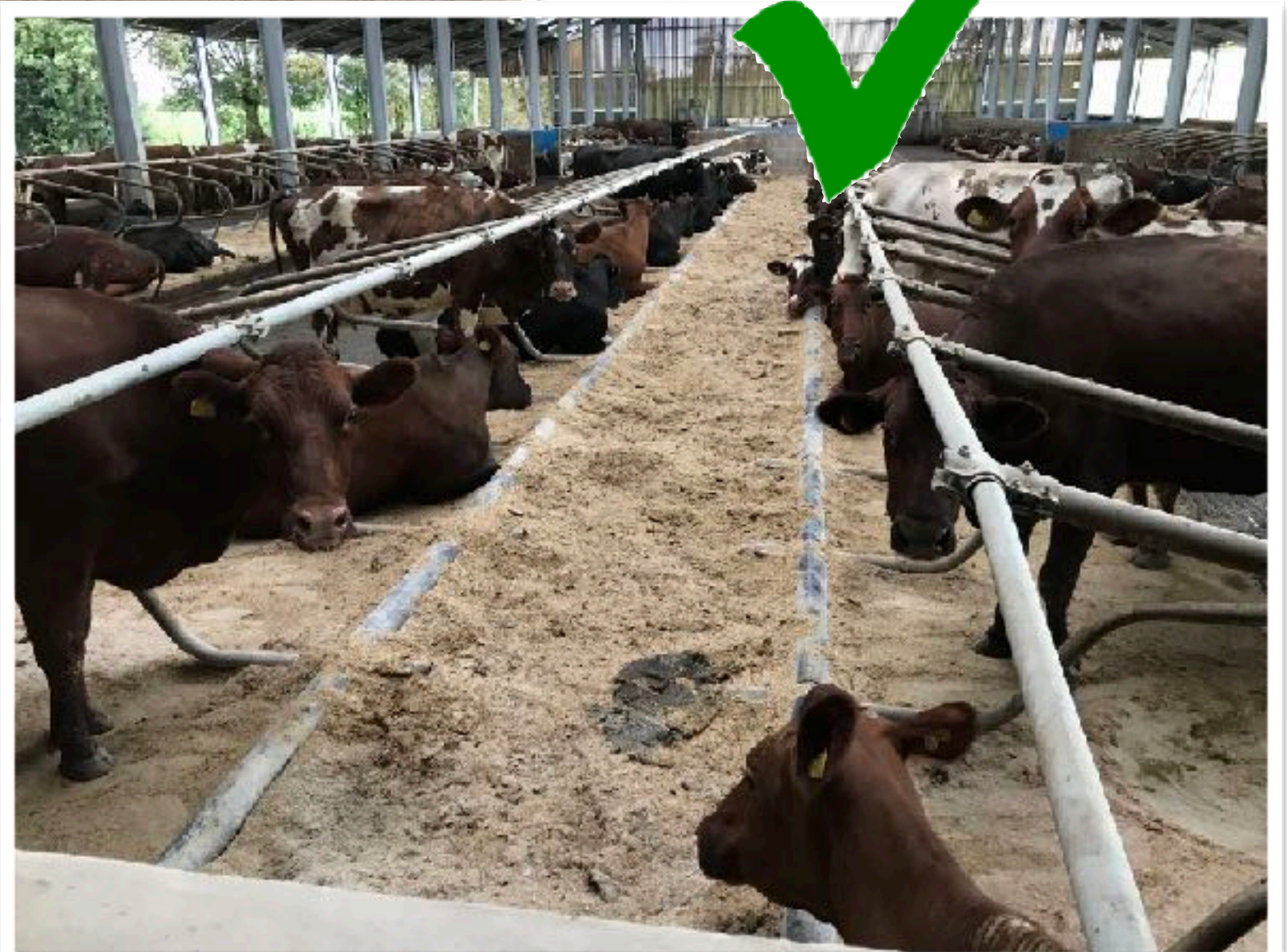
**vs individually fixed
(non-adjustable width)**



+/- 1metre height



**Cantilever design
(adjustable width):
has a bottom bar in
the bob zone**



**vs individually fixed
(non-adjustable
width): no bottom
bar restricting bob
zone**

Norbco® Single Beam Mounting system...



...the only cantilever (adjustable width) system I know of which has an open front/ no bottom bar obstructing the bob zone

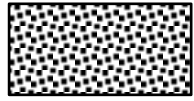
“Indexing”



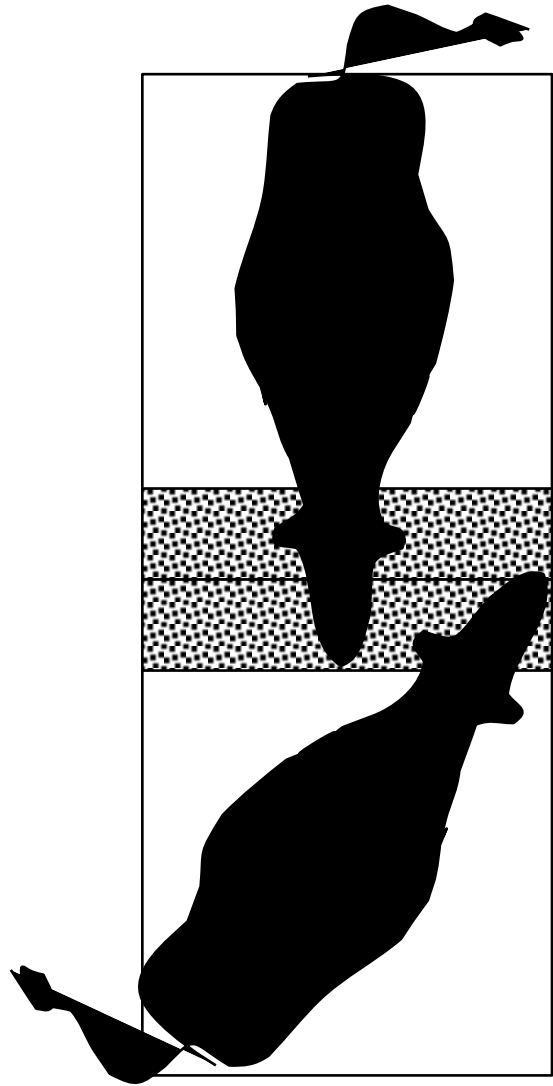
In other words: do the cows lie straight or diagonal?



Resting area

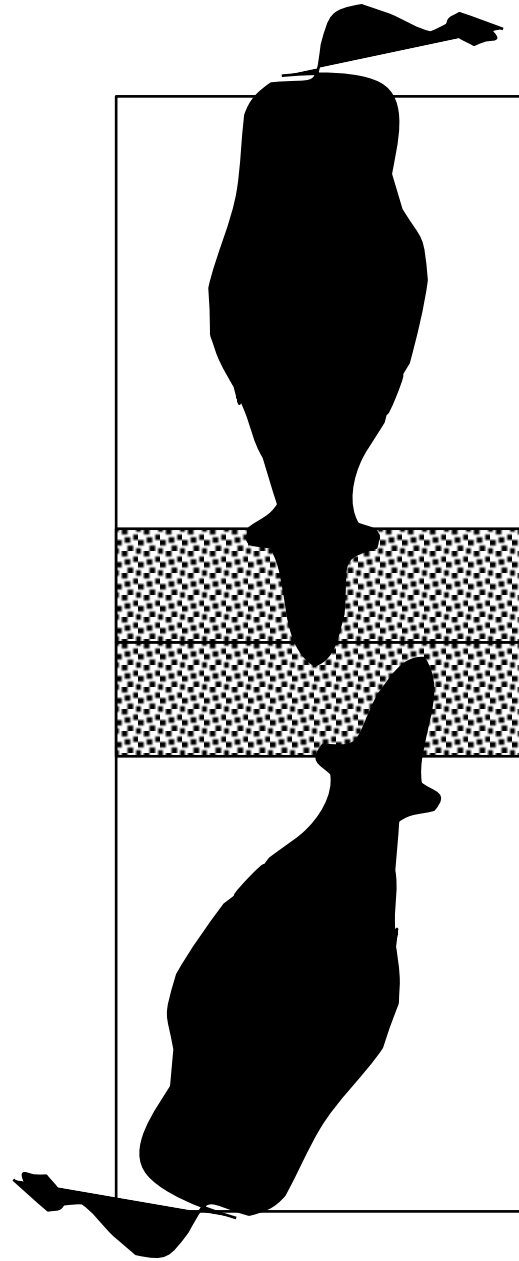


Lunge area



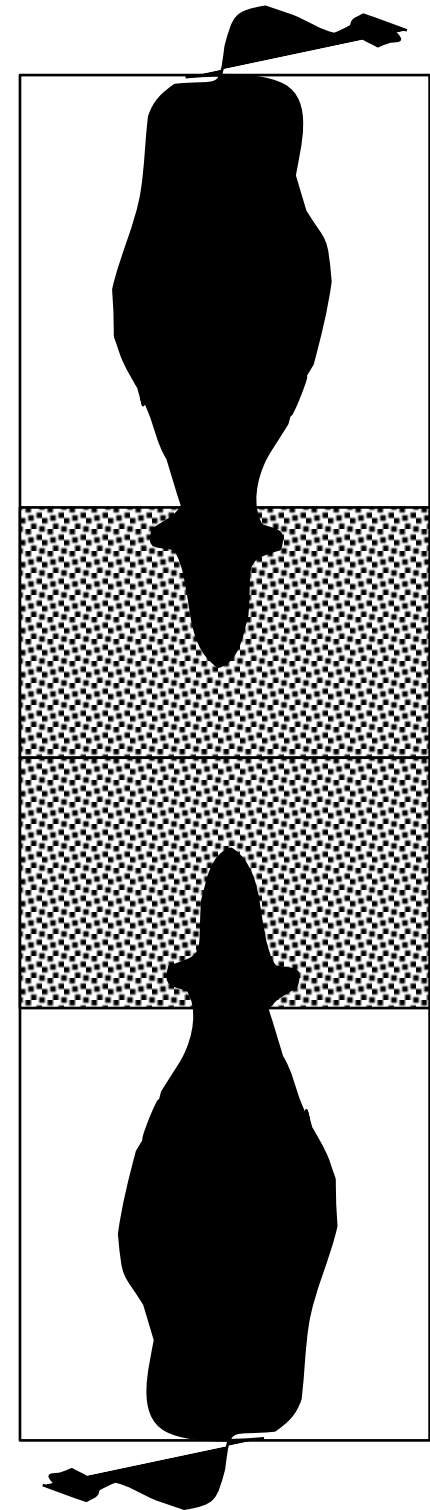
15'

a



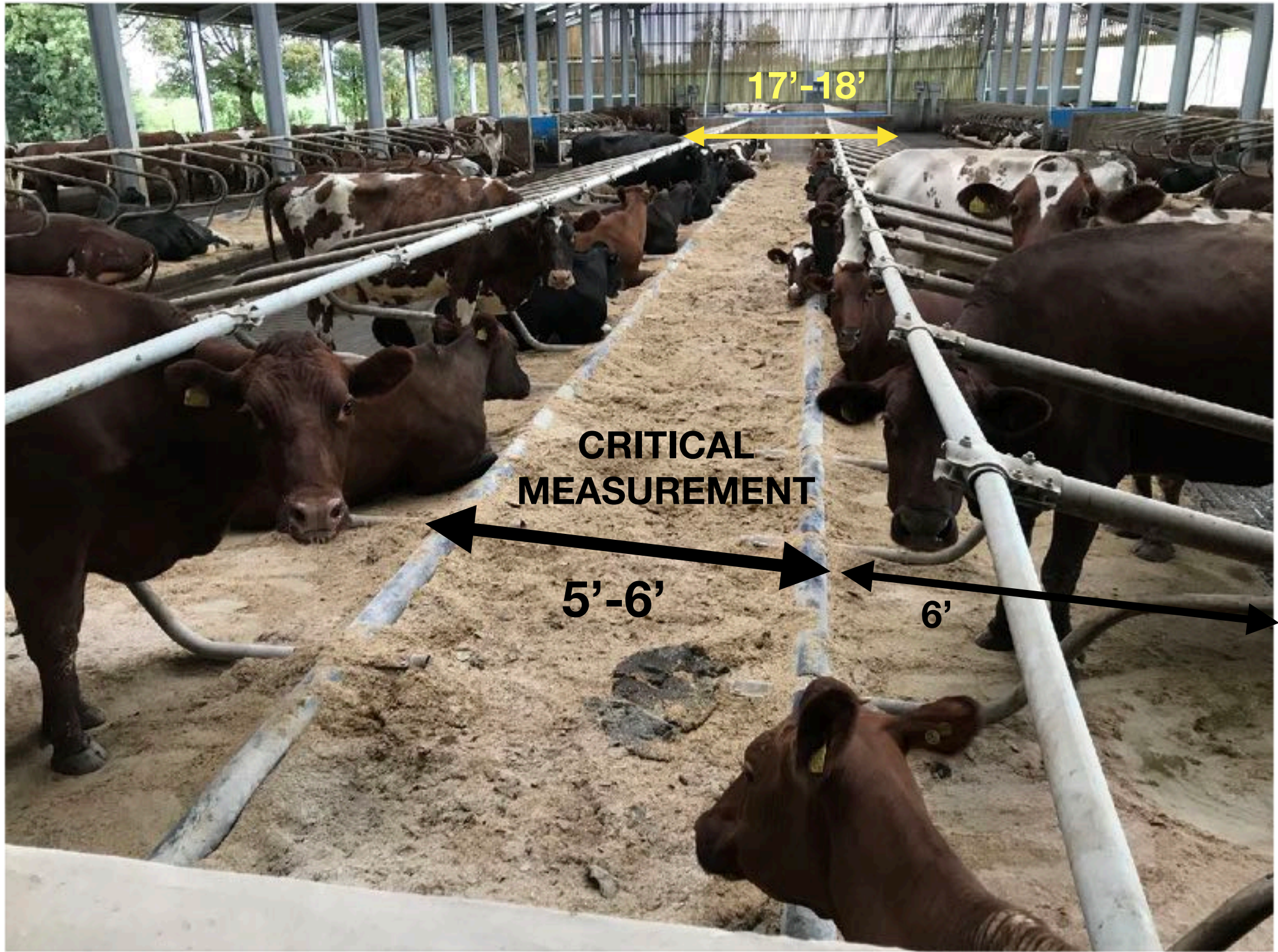
16'

b



17-18'

c



17'-18'

CRITICAL
MEASUREMENT

5'-6'

6'

Cubicles: 6 Principles

6: Width and Dividers

Must not cause injuries to cows - preferably no contact - whilst encouraging straight lying position



These Newton-Rigg cubicles have had the rear upright removed and middle bar replaced with rope. A reasonable temporary improvement.





172cm

127cm

~700kg

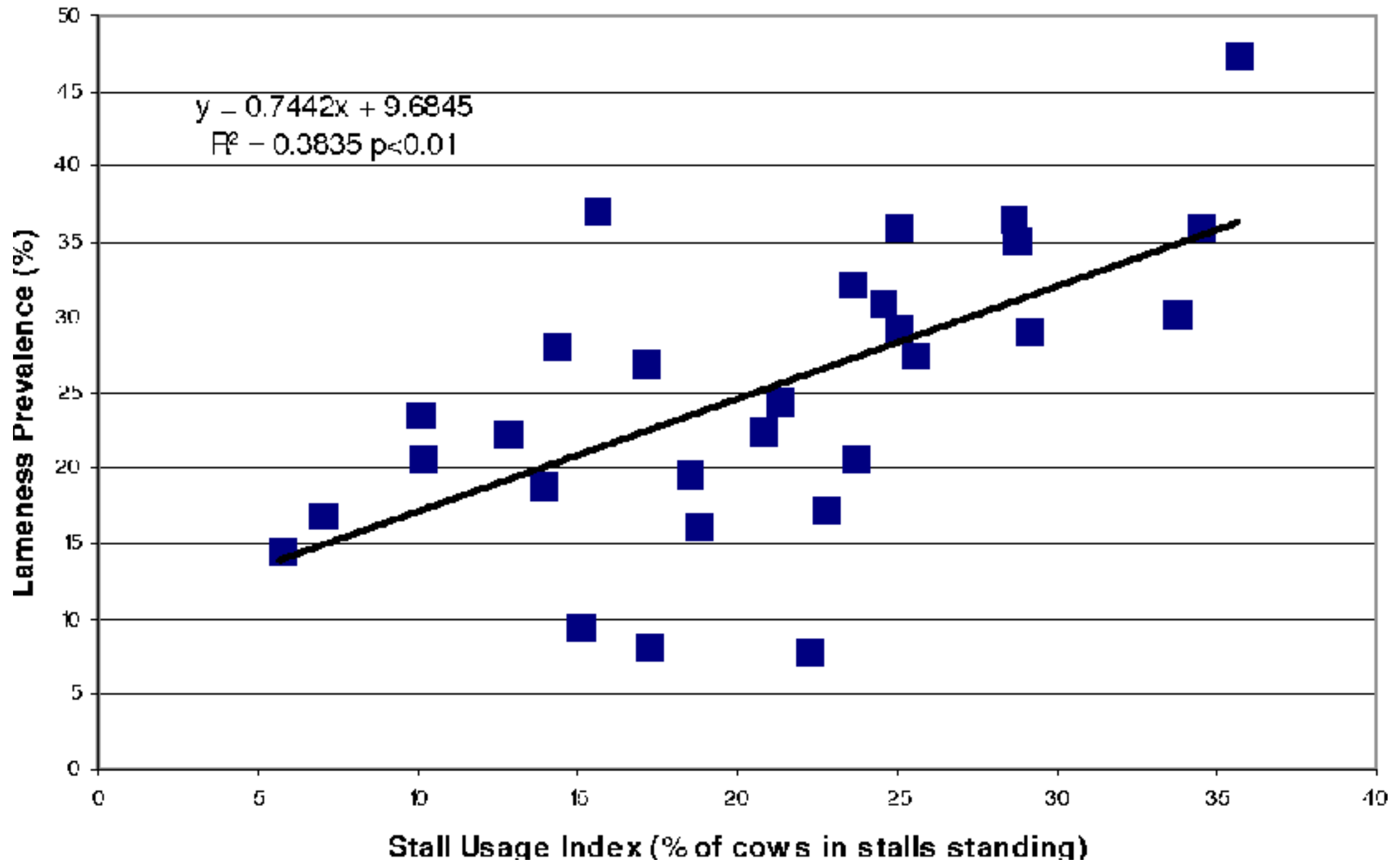
50 cm

30cm

Six things to check for cubicle comfort

1. Lying Surface
2. Bed length
3. Unobtrusive neck rail
4. Brisket locator
5. Head space, lunge room and bob zone
6. Divider and width

And this is the “why”



...greater cubicle comfort = less lameness



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