

FREESTALL DOCTOR

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Improving cow comfort has been shown to provide large increases in milk yield, cow health and reduced cull rates of underproducing cows. Over the years animal size has increased and confinement systems have evolved so that many producers have to decide if remodeling their freestalls can improve cow comfort and reduce undue cull rates thus increasing their bottom line.

Cushion:

Improving the cushion in cows laying area can improve the comfort of the animal. Producers have several alternatives to explore such as, deep bedded sand, sand over a matt or concrete, deep bedded organic bedding, mats or mattresses with more cushion, and recycled manure solids.

Each deep bedded sand stall may use about seven to nine tons of sand a year. This option is very cow friendly as hock lesions almost disappear. Sand is groomed daily and sand in the cow alleys improves traction and the improved footing reduces slipping when cows show estrus. The drawback is the manure handling becomes more difficult and expensive. If you have good stall dimensions, a bedding keeper, or sand over a mattress could improve cushion with less sand cost and little remodeling. Another option some pick is to purchase a mat with more cushion under the harder rubber top. These mats require little remodeling, but producers should remember that raising the platform a couple of inches might decrease comfort unless you raise the neck rail.

Using recycled sand or manure solids increases cow comfort but require a major investment in structure and management time and resources. Both sand and manure solids will need to sit and drain moisture or

heat and kill bacteria. Given an increase of pathogens to the udder with these systems, producers must decide if they will invest their time and ability to meet the increased demands.

Stall Dimensions:

Over time cows have been bred to be larger which sometimes puts them in stalls that were developed for smaller cows. New stall width and length recommendations can be found in the following chart.

Stall Dimension (inches)	Body Weight Estimate (lbs)				
	1000	1200	1400	1600	1800
Total stall length facing a wall	96	96	108	120	120
Head-to-head platform length	192	192	204	204	216
Distance from rear curb to brisket locator	64	66	68	70	72
Center-to-center stall divider placement (Stall width)	44	46	48	50	54
Distance of brisket locator above stall surface	3	3	4	4	4
Height of upper edge of bottom divider rail above stall surface	11	11	12	12	12
Height below neck rail	44	46	48	50	52
Horizontal distance between rear edge of neck rail and rear curb	64	66	68	70	72
Rear curb height	8	8	8	8	8
Rear curb width (loose bedded stalls)	6	6	6	6	6

For more information, please contact:

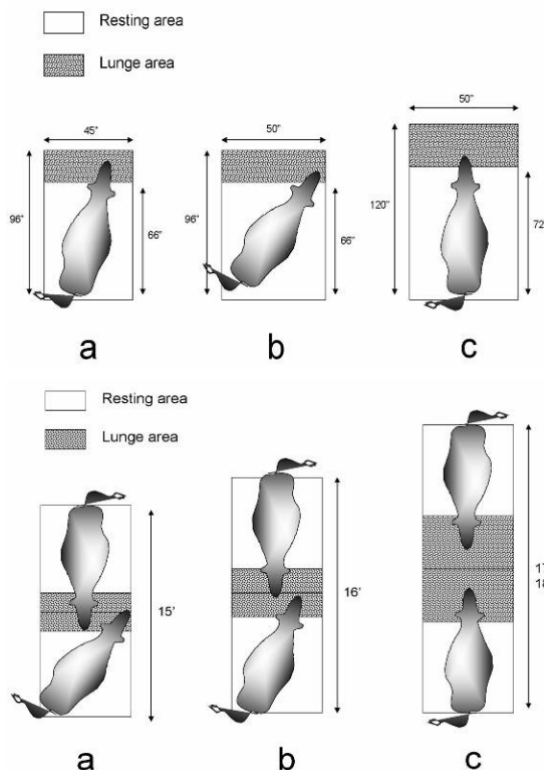
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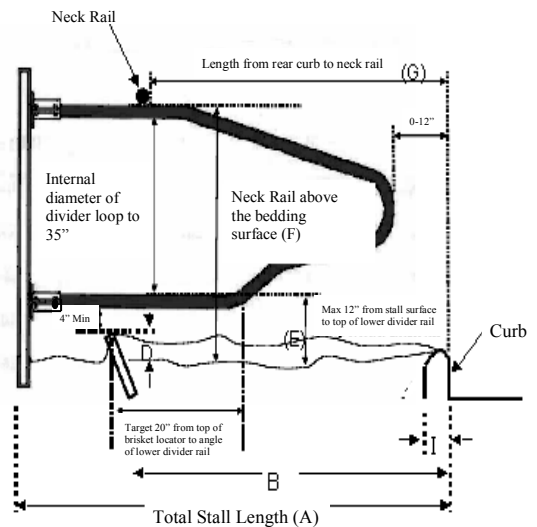


Producers are sometimes reluctant to tear out concrete to increase length and width of stalls when many times the number of stalls will decrease and alleys become narrower. A “doghouse” can be added to the outside wall of an old freestall barn to fix the length of the outside freestall. This can be two to three feet wide and gives the cow extra lounge or bob space to get up and down. This addition can be as high as the eave or just about half the height of the outside wall, thus doghouse effect. When you do this your back curb does not have to be moved.

The diagrams below show how stall dimensions let cows lay in comfort and index in the stalls by design more than forced compliance. Adequate length and width allow cows to occupy stalls head to head and have room to lunge and bob forward without interfering with other cows. Boss cows are less likely to disrupt cows who have enough space.



Recommendations for loops, brisket locator and neck rails help provide adequate space and correct indexing in stalls. Brisket locator and neck rails misplaced will decrease stall usage. Producers should look for shiny neck rails, or rubbed spots on the point of the shoulders for indicators of neck rail adjustments. Moving the neck rail ahead, up or back can help cows use the stalls and reduce injury. Most producers will improve milk yield, reduce lameness, and reduce culling of underproductive cows by investing in improved cow comfort. Information is available to help you evaluate your individual situation.



References:

Dairy Freestall Housing and Equipment MWPS-7
 Raising Dairy Replacements
 Investments in Cow Comfort by Nigel Cook
 MRCVS School of Veterinary Medicine, UW-Madison

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