

FREESTALL DOCTOR

Zen Miller, UW-Extension Outagamie County

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:

Brian Holmes
UW-Extension
Dairy Systems Engineer
(608)262-0096
bjholmes@wisc.edu
<http://bse.wisc.edu>

Zen Miller
UW-Extension Outagamie
County
Dairy & Livestock Agent
(920) 832-5119
zen.miller@ces.uwex.edu



