



**WAUKESHA COUNTY UW-EXTENSION
ADMINISTRATION CENTER RM G22
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COW COMFORT ON MATTRESSES OR SAND STALL SURFACES IN A TIE STALL BARN

Dairy producers are using different stall surfaces in order to optimize cow comfort, while at the same time decreasing health concerns. Tie stall barns have challenges associated with this since stall dimensions in many barns are inadequate due to the origin of the facility. Four to six inches of bedding is required to provide a cushion above concrete stall surfaces. Using the right amount of the bedding and/or maintaining it under animals to provide this cushion is another challenge.

Sand or a variety of mattresses (some type of filling or stuffing with a top cover) are used in free stalls and tie stalls as well to provide adequate comfort and health. Sand is very comfortable (gold standard) but offers some labor and manure handling challenges. Most mattress materials can be fabricated to fit existing stalls. Although mattresses provide 3-4 of cushion, adequate bedding materials are required on the mattress surface to expedite moisture absorption and provide cushion from animal joint friction and abrasion from the top cover surface. Concerns and questions have arisen regarding the comfort of mattresses compared to sand.

A study was conducted in Iowa State University in 2006 to compare cow comfort and leg health in cows housed on sand or mattresses, and then switched to the alternate surface in a tie stall barn. The study showed that cows housed on mattresses had significantly higher hock scores (hock abrasions). When mattress cows are switched to sand, hock scores improved slowly. The study concluded that either stall surface will work and be comfortable. Whichever stall surface you are using, stall maintenance, sand quality, sand grooming, and especially adequate bedding on top of mattress top covers is critical for stall comfort success.

For more information and assistance with this topic and dairy modernization, please contact me at (920) 674-7442 or via e-mail al.ahmed@ces.uwex.edu.

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