

## Effects of Facility on Udder Health: Part 2

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Last month, proper facility design for cow comfort and udder health was discussed. More information on this topic can be found at the University of Wisconsin-Madison's Dairyland Initiative website (<https://thedairylandinitiative.vetmed.wisc.edu/>). This month specifically addresses the topic of bedding.

The two main types of resting surface include deep loose bedding or a mattress style. Sand is the most popular choice and is the gold standard. Other options for deep loose bedding include manure solids, sawdust, shavings, or straw. According to a recent survey of Wisconsin dairies by Dr. Nigel Cook, UW-Madison School of Veterinary Medicine, 70% of freestall facilities use deep loose bedding and 64% of these facilities use sand.

From a production standpoint, research by UW-Madison revealed that in herds shipping more than 25,000 lbs of milk per day, 60% of herds using inorganic bedding such as sand produced 2,401 lb more milk per cow per year than those using manure solids and other organic bedding. The somatic cell count was also lower for herds with inorganic bedding (198,000/ml vs 248,000/ml manure solids and 220,000/ml organic bedding).

Ideally, sand used for bedding is not too coarse nor too fine for udder health and comfort. According to the Dairyland Initiative, ideal sand is >95% dry matter, <4% organic matter, and has fresh bedding total bacterial counts of <5,000 colony forming units/ml. Adding fresh sand twice a week is typically sufficient to maintain reasonable fill. It is important to keep sand at or near the level of the rear curb in stall. It has been suggested that for every ½ inch that sand is below the back curb equals 20 minutes less laying time for a cow, subsequently impacting milk production. Contaminated sand should be removed at each milking and beds should be leveled. Redistributing sand from beneath the divider loops and aerating the top 3-4 inches is recommended. The compaction zone below the surface where the sand becomes hard like concrete should also be monitored. When the compaction zone gets within 2 inches of the rear curb, the rear third of the bed should be removed and replaced with fresh, uncontaminated sand.