

Benefits of grooming stalls

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As we move into the summer months, it is not uncommon for us to hear complaints about increases in cases of mastitis, particularly those caused by *E. coli* or *Klebsiella*. One strategy to help control the severity of cases on farms is vaccination, however, the use of vaccines will certainly not eliminate all cases on farms. Another strategy happens to be stall grooming, which has many other benefits besides mastitis control.

No matter the bedding type you choose to use, it is important to use an appropriate amount and frequency. Furthermore, removal of the soiled bedding and even the entire back third of the stall is important for keeping cows clean, comfortable, and to reduce mastitis.

- **Amount:** The amount of bedding added depends on the bedding type and stall bed. In general, the goal is to provide a clean, dry surface for the cow to lay on and enough cushion to prevent injury. Observing the cow can tell you if you are bedding with adequate amounts. The ideal lying time is 12-14 hours in a day. An excellent study out of the University of British Columbia documented the effect of sand bedding depth and distribution on cow lying time.
 - Over time, stalls become concave and the lowest point was in the center of the stall. When stalls were allowed to reach 5-6 centimeters below the curb level at the lowest point, lying time was reduced by 1.15 hours!
 - For every 1 cm decrease in bedding (compared to curb level), cows spent 11 less minutes lying down.
 - When stalls filled with sand to curb level were compared to stalls that were 13.7 cm below curb, cows spent 2.33 hours less lying down. Furthermore, cows also had shorter lying bouts, which might indicate that they are not comfortable lying in stalls that need bedding.
 - Why does this matter? Lying time means milk production! Reduced lying time can have a negative impact on milk production, foot, and leg health.
- **Frequency:** Adding large amounts of material less frequently can lead to increased bedding waste after filling and cause undesirable cow positioning prior to the next bedding. Bedding twice a week for sand often works well. Mattress and mat based stalls require more frequent bedding applications to provide a clean, dry surface and to reduce hock injury.

- **Grooming:** The bed environment is greatly affected by its surrounding environment. When a cow steps into the stall, she first steps near where her udder will be positioned. Therefore, regular removal of manure and urine from cow alleys, ideally at every milking, will help reduce manure tracked onto the stall surface. Furthermore, removing urine soaked sand, manure patties, and “fluffing” the sand is important. **Grooming is not the same thing as simply removing fecal contamination. Grooming involves aerating the beds and smoothing the surface out.** This should be performed after manure is removed and several times a week, if not daily! Also, good ventilation is essential to keep bedding dry.
- **Removal of back third of stall bedding:** Manure, urine, and milk will collect in layers below the surface. This layer is often the “black layer” we talk about. Bacteria populations in bedding increase with the amount of time it is in the stall. Therefore, avoid bringing this material or the black part to the top when grooming stalls. We recommend removing this black layer in the back third of the stall twice a year to reduce bacteria levels and reduce mastitis risk.