



## SCC DIAGNOSTICS TOOL BOX



### R-EF-3: Bacterial Counts in Organic Materials Used as Freestall Bedding Following Treatment with a Commercial Conditioner

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#### **Abstract**

An acidic conditioner was tested in recycled manure and sawdust used as free-stall bedding to determine the effect on bacterial counts of common environmental mastitis pathogens. Free stalls were bedded with 10 kg of either kiln-dried sawdust or recycled manure per stall. All bedding was removed and fresh bedding was applied every 7 d. Approximately 1 kg of commercial bedding conditioner containing 93% sodium hydrosulfate (wt/wt) was spread evenly over bedding in the back one-third of each treated stall. Control bedding received no treatment. Cows were bedded on the same material for 3 consecutive weeks. After 3 wk on a bedding treatment, cows remained in the same pens and bedding treatments were changed between rows within pens in a switch back design. The addition of bedding conditioner to sawdust reduced gram-negative bacterial, coliform, *Klebsiella* spp., and streptococcal counts immediately after application and 1 d after application. Bacterial counts did not differ between treated and untreated sawdust on d 2 and 6 after the conditioner treatment. Each bacterial count measured was reduced in recycled manure immediately after application. Gram-negative bacterial and streptococcal counts were reduced in treated recycled manure compared with untreated recycled manure on d 1 after conditioner was applied. Bacterial counts did not differ between treated and untreated recycled manure bedding on d 2 and 6 after application in free stalls. The antibacterial activity of the conditioner was related to the pH of the bedding and was diminished by d 2 after application in both bedding types.

**Key words:** bedding, bacterial count

