



Are Sand or Composted Bedding Cubicles Suitable Alternatives to Rubber Matting for Housing Dairy Cows?

Mike Steele

Welcome to this podcast on the Knowledge Summary, 'Are sand or composted bedding cubicles, suitable alternatives to rubber matting for housing dairy cows'. My name's Mike Steele and I'm the author of this Knowledge Summary, I'm a Dairy Consultant and Director of Inspire Cattle Solutions. So, the reason why I did this search is because when farmers upgrade their facilities, they commonly ask the question, which bedding is going to be associated with improving income and reducing risk of disease on their farms.

So, I compared the three most commonly used bedding types around the world in most dairies, which are sand. Recycled compost manure solids and rubber mattresses on concrete. And when I looked at papers, I looked at the aspects of mastitis risk, which are the incidents of clinical mastitis and subclinical mastitis in terms of somatic cell count. And also, I looked at the differences in bacterial growth on each medium. In terms of lameness risk, I looked at cleanliness, hock lesions, hoof health not specific to lesion, and behaviour associated with the beddings such as lying time, standing time installs and frequency of lying bouts.

And the findings were sand had the least organic matter, which supports the least amount of bacteria. All materials seem to have growth when they were wet and hot and dirty. So, the importance of keeping these bedding types clean is absolutely paramount.

The lowest incidents of clinical mastitis and subclinical mastitis was found on sand bedding and then composted manure, and then rubber matting. And also, that went for in terms of bacterial growth as well, the least amount on sand to the most amount on rubber matting. In terms of lameness lying time was greatest on sand, and that was even greater than on pasture. The frequency of bouts of lying were greater on sand and hoof health was also better on the sand and with each one centimetre depth of bedding there was 11 minutes more lying time in the stalls. Now this is really interesting because the longer cows spend laying down, the more they tend to ruminate and therefore the more energy they can get out of their food, and it implies better yields as well. In terms of appraisal, there was one systematic review, one randomized control trial, but out of the 54 papers reviewed most were cohort studies. And also, in terms of cleanliness, there was scoring systems used. So, there could have been some subjectivity there, but most used multi-variate regression statistics to negate this where they could. So, in conclusion, sand was best, then compost then mattresses in these aspects, the value of this is seen to increase profits by reducing disease and therefore having better yields and potential to increase feed over income costs.

Okay, so thank you very much for listening to this podcast.

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