KIRKTON
BOVINE SERVICES

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DAIRY NEWSLETTER

Stall Bedding for Dairy Cattle

The average lactating dairy cow spends 10-14 hours per day lying down. The bedding material and quantity of bedding used in a stall can significantly affect stall comfort, thereby playing an important role in increasing the number of resting hours and resting bouts performed by the cows on your farm.

A comfortable stall that encourages more lying time can reduce the amount of lameness, knee and hock lesions on a farm significantly, which are all desirable outcomes with respect to the Pro Action Animal Care module that will come into effect in September 2017.

The most desirable traits required of any bedding substrate are:

- The ability to provide cushion
- The ability to conform to the resting cow
- The ability to resist compaction
- The ability to enhance traction
- The ability to prevent injury
- Dry
- Inhibits microbial growth

Types of Bedding Sources:

There are two basic bedding categories: Organic and Inorganic.

According to Dr.Nigel Cook from the University of Wisconsin, “all systems succeed, and all systems fail”. Regardless of the type of bedding selected, management plays a key role in its future success or failure.

Organic bedding, such as straw, shavings or a compost pack, easily absorbs surface moisture to aid in stall dryness, however it does pose an increased ability to support pathogen growth.

Inorganic bedding, such as sand, drains moisture away from the surface, may improve footing and as it is inert, does not support pathogen growth. Most research supports that the ideal bedding surface for lactating dairy cows is sanding bedding for its ideal comfort and cleanliness characteristics.

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How much to use?

Regardless of material used, a generous bedding depth is necessary to provide adequate support. A depth of 4-8" is recommended, regardless of material. The use of mats (rubber, foam, water or gel) under the bedding material can assist in providing some percentage of the necessary bedding depth, but should not be counted on as the only source of comfort for a stall. A study performed at the University of British Columbia by Marina **von** Keyserlingk showed cows spend more than 2 hours extra per day lying on deep bedded sand stalls, than on a mattress. In addition, there was a strong preference for cows to use stalls bedding with 17lbs of sawdust on top of a mattress, compared to stalls bedding with only 1-2lbs of sawdust on a mattress.

Bedding Management

Regardless of bedding type, management of the stalls, to maintain a clean, dry bed is the key to success, both for cow comfort and milk quality. Stall design to limit the amount of fecal and urine contamination is a must, but after that, stalls should be assessed and cleaned a minimum of 3 times per day. Once cleaned out, any holes or divots should be filled in, to not act as a pooling area for future fluids. If using organic bedding material, it should be replaced daily and if using inorganic bedding material it should be topped up once per week at minimum. Remember, reducing the volume of bedding material reduces the effectiveness of the bedding material.

Assessing Bedding Quality

Stalls should be clean, dry and comfortable at all times. A quick and easy test to assess the general state of your stalls bedding is the simple kneel test. Kneel down in the stall for 30 seconds and upon standing your knees should be dry. Your body should also be comfortable in the position – your body weight resting in the stall for 30 seconds is only a fraction of the 1300lbs of dairy cow that rests for 10-14 hours. Bedding bacterial counts may also be recommended by your veterinarian if milk quality issues are suspected to be linked to stall and bedding management.

Happy, healthy cows are the goal on all our farms. Next time your veterinarian is out to the farm, critically assess the bedding management and stall comfort in your barn together, to see if there is more we should be doing to keep the girls comfortable.