

will impact other agricultural industries.

In the U.S., horses number more than 9 million, consuming vast quantities of staple commodities and hay. In short, the horse industry helps prop up vital services used by other types of farming, such as large

rights groups and has the potential to cause trouble that can reverberate through our entire farming system.

Since horses can generate a greater emotional appeal than other farm animals, animal rights movements have cut their teeth on horse issues

cages for chickens. Designating horses as livestock does not require an all-or-nothing decision. One owner can still consider his or her horse as a highly regarded workmate, while neighbors can see theirs as cherished pets, all the while adding federal and

end, would reduce a vibrant industry to one enjoyed only in restricted areas or afforded only by the elite.

The Horsemen's Council of Illinois, along with other state and national organizations, including the American Association of Equine Practition-

state.

Sheryl King, Ph.D., serves as president of the Horsemen's Council of Illinois. She retired as director of the Southern Illinois University (SIU) Equine Science Program and general manager of the 50-head SIU Horse Center.

Bedding, milk quality go hand in hand on Illinois dairy farms

BY DR. PHIL CARDOSO

Last summer, the University of Illinois Dairy Focus Team visited 20 Illinois dairy farms. One of the objectives was to investigate the association between bedding material and milk quality in dairy farms.

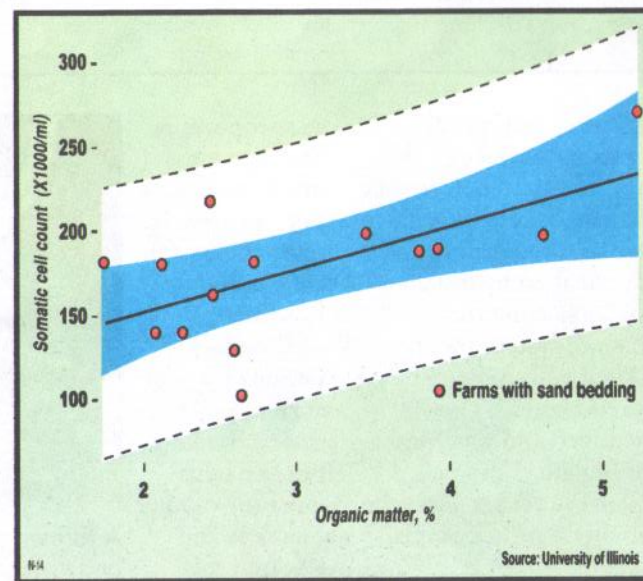
Usually, two main types of bedding are available for dairy farmers: organic bedding: wood shavings, sawdust, manure solids and straw; and inorganic bedding: sand and mattress. It is important to choose a material that provides a clean and comfortable surface for the cow to lie down while still being economical.

The type, amount, percentage of dry matter (DM) and percentage of organic matter (OM) in the bedding can influence dairy cows' lying

behavior and performance. Failure to maintain adequate amount of bedding will result in stalls that are not comfortable, which can result in hock injuries (bald spots) and sole ulcers that can be caused by prolonged standing time.

Sand is still the most popular bedding type. Over time, bedding quality decreases as it becomes contaminated with urine, milk and feces. This implies an increase in OM and a decrease in DM. Cows should be bedded with sand containing less than 3 percent OM and more than 95 percent DM.

Manure handling and stall design can be considered one of the biggest challenges in bedding systems. When manure is mixed with sand, it can be



challenging to clean barns. So, the barn set up, the alley floors and manure-handling systems should be adapted to solve this issue.

A proper neck rail location will prevent the presence of urine or manure in the bed. An ideal position of the neck rail is 64 to 72 inches forward from the rear curb. A brisket board can restrict the forward location of a cow lying in the stall. Ideally, the brisket board is less than 2 inches away from the neck rail.

During our visits, we found 16 farms (80 percent) had a sand bedding system; approximately 32 percent of those farms had a combination of sand and different type of bedding like straw or compost. Among the other four farms, there were two (10 percent) with straw bedding; one (5 percent) had

sawdust; and one (5 percent) had its cows on pasture.

Bedding samples were taken from different spots located in lactating and dry cow stalls. Dry matter analysis was performed in all types of bedding, and OM analysis only in sand-bedded stalls. On average, the 12 farms that used sand as bedding had 92 ± 8 percent DM, 3 ± 2.7 percent OM, and average tank somatic cell count (SCC) of $204,000 \pm 91,000$ cells/milliliter. As OM in bedding increased, the SCC also increased.

Remember that bedding quality is associated with the ability of the animals to express natural behavior, and with milk production and quality. High SCC is associated with low milk production and higher risk for mastitis. Dairy farmers should know the quality of the bedding material used in their operations and that their management allows for OM less than 3 percent and DM greater than 95 percent.

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