

Herd management and milk production in farms with automated milking systems

Benchmarks for housing and management point to strategies for improved milk production

By Caitlin Ford

Improved milk production and quality on Canadian dairy farms are expected to result from a benchmark study on herd management and housing conditions conducted by University of Guelph researchers.

In 2019, Dr. Trevor DeVries, Department of Animal Biosciences, and graduate student Robert Matson led a research team that visited 197 farms across Canada that use automated milking systems (AMS). They collected data on-farm and detected associations between milk quality and production and various housing and management factors.

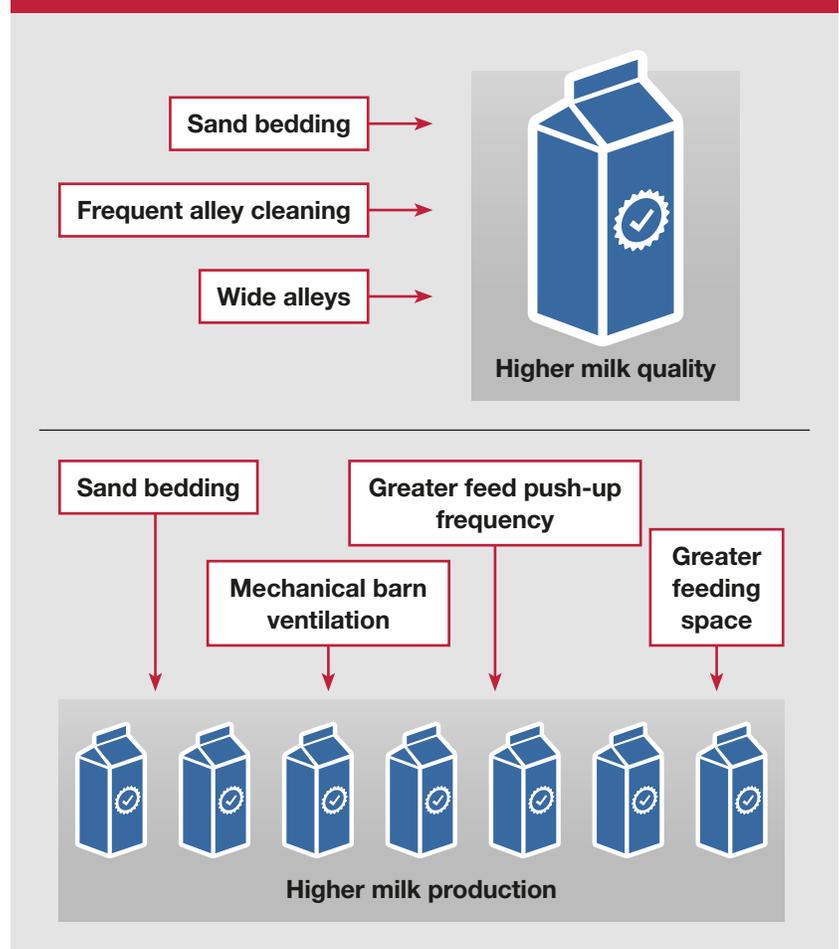
“Our research aimed to provide a benchmark for housing and management across Canadian AMS farms because this hadn’t been done before,” says DeVries.

The team collected data on characteristics like the size of herds, barn measurements, feeding practices, and bedding management, as well as cow data on milk yield and composition.

They found that greater milk production was associated with those farms using sand versus organic bedding types; barns with mechanical ventilation systems versus natural ventilation systems; farms with greater feeding space per cow; and farms that had improved feed access through greater feed push-up frequency.

Higher quality milk—determined by lower somatic cell count in the milk, which can indicate infection—was associated with using sand bedding, wider alleys, and more frequent alley cleaning.

Factors associated with milk quality and production levels



DeVries says that while these associations do not necessarily specify a direct cause and effect, they can help farmers make decisions about how they manage their herds.

“For this project we provided participating farmers with an individualized report to see how their farm measured up to the other farms in their similar geographical region,” he said. “Then they could look at the associations and determine what areas potentially

need improvement to optimize their herd’s housing and management.”

DeVries says the data from this research also helps farmers who did not participate in the study, as the studied herds were representative of herds across many geographical regions.

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