MOOS NEWS

From the Stall of
Dr. Mark Jamieson



Keeping Cows Cool
Why Ventilation Matters More Than Ever!

August 2026

When we visit farms, we see every type of ventilation system imaginable—natural ventilation, HVLS ("helicopter") fans, basket fans, tunnel ventilation, and everything in between. There isn't one perfect system for every barn, but there are a few principles that every successful ventilation system has in common.

As milk production has increased over the years, so has the amount of heat cows produce. A cow giving 55 kg of milk per day produces about twice as much body heat as a cow producing 20 kg. In other words, your highest-producing cows—the ones generating the most profit—are also the most likely to struggle with heat stress. Most producers notice milk production drops during hot weather, but heat stress affects much more than the bulk tank. Cows that are too warm spend less time lying down, eat less, become less fertile, and are at greater risk for lameness and mastitis.

One of the first things we notice in heat-stressed cows is a change in behaviour. Cows may spend up to three fewer hours per day lying down because standing helps increase airflow around their bodies. Unfortunately, standing requires about 15% more energy than lying down and puts additional stress on their feet. The lameness cases you see later this summer—or even into the fall—may actually have started during a period of heat stress.

Heat-stressed cows also tend to bunch together or crowd into areas of the barn with better airflow (to cool down and avoid the flies!). This reduces available resting space, dirties stalls more quickly, and can increase the risk of elevated somatic cell counts.

What Makes a Good Ventilation System?

Regardless of the type of fans you have, an effective ventilation system should accomplish four things:

1. Provide adequate air exchanges per hour to remove air pollution
2. Provide a minimum cooling airspeed
3. Functions across all 4 seasons
4. Be practical and economical for your operation.



During the summer, barns should provide a minimum 1,500 cubic feet per minute (CFM) of airflow per adult dairy cow, which translates to roughly 40 air exchanges per hour.

Just as important as airflow volume is air speed. Cows need a minimum air speed of 1 metre per second over their resting area before they experience meaningful cooling. This should be measured at cow resting height (about 0.5 metres above the stall surface) using an anemometer (a handheld tool to measure airspeed). It's possible to move plenty of air through

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a barn without actually cooling the cows if the airflow isn't reaching where they are lying. Average airspeed can be calculated using barn dimensions and fan CFM, but does not account for the cow microclimate in the stalls.

Natural ventilation works well on breezy days, but it simply isn't reliable enough to keep high-producing cows cool throughout an Ontario summer. Mechanical ventilation has become an essential tool on many farms to help maintain production, fertility, and cow comfort.

Small Changes Can Make a Big Difference

Not every farm is ready for a major ventilation upgrade, but there are several simple improvements that can increase cooling efficiency.

- Clean fan blades and louvers regularly. Dust buildup can dramatically reduce fan performance while increasing electricity costs.
- Keep air inlets clear so fresh air can enter the barn freely.
- Start fans when temperatures reach 18°C. High-producing cows begin experiencing heat stress well before temperatures hit 20°C, especially when it is humid
- Continue running fans into the evening and overnight. Cows store heat during the day and need time to cool off.
- Aim fans over the stalls at resting height. While cooling the feed alley is helpful, cows spend far more time lying down than eating.
- Consider having your ventilation system evaluated. Ideally, at least 90% of stalls should receive air speeds greater than 1 metre per second.

If your barn relies mostly on natural ventilation, adding even a few strategically placed fans over your high producing cows or dry cows can make a noticeable difference. Watch your cows. A normal respiration rate is less than 60 breaths per minute. If cows are breathing faster than this, they're telling you they're too hot.

Good ventilation is an investment in production, reproduction, hoof health, and overall cow comfort. If you'd like help assessing airflow in your barn or discussing ventilation improvements, talk to your herd health veterinarian during your next visit.

J-Vac Vaccine Backorder

The J-Vac mastitis vaccine is expected to be on backorder until at least December 2026, and possibly longer. We know product shortages are frustrating, and we're working with our suppliers and manufacturers to secure inventory and identify suitable alternatives.

At this time, we have two mastitis vaccines available:



Enviracor – approximately $1 more per dose than J-Vac, available in 20-dose bottles, with no milk withdrawal and a 60-day meat withdrawal.

TopVac – approximately $2 more per dose than J-Vac, available in 25-dose bottles, with no milk withdrawal and a 21-day meat withdrawal. TopVac also provides protection against Staphylococcus aureus, making it an attractive option for some herds.



If your herd currently uses J-Vac, we'll work with you to determine the best alternative while supplies are limited. If you've never used a mastitis vaccination program but are interested in learning whether it could benefit your herd, we'd be happy to discuss the options during your next herd health visit.

Team Update



Please help us welcome back **Dr. Shannon Finn** from maternity leave! We're so happy to have her back in the clinic, working Mondays and Fridays, and returning to our on-call rotation.



We'd also like to welcome **Dr. Ally Langford**, a recent OVC Class of 2026 graduate, to the MW Vets team! We're excited to have her join us and know she'll be a wonderful addition.



Over the next little while, you may see Dr. Ally riding along with our veterinarians as she gets to know our clients, our farms, and the way we provide care. It's a great opportunity for her to learn more about our practice while building relationships throughout our community.