

Herd Health: Heat Abatement

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As summer gets into full swing the impact of heat stress becomes very clear. The revised temperature humidity index (see chart page 32) indicates that a threshold of 10°C (68°F) is where milk loss is detectable and conception rates are affected. At 68°F the breaths per minute (BPM) per cow will begin to exceed 60 BPM and the core body temperature exceeds 38.5°C (101.3°F). A little walk to the milking parlor coupled with a little crowding in the holding pen will increase heat stress even further. Heat and its stress quickly begin to nip away at your milk production, conception rates and profit.

Welcome to summer!

Remember, a 0.5°C increase in core body temperature can affect conception rates by as much as 13%. Milk production is not only affected during the heat stress period but will cost you throughout the complete lactation as well. Claw health and over all herd health will also be affected. Summer may be fun for the kids but not for our dairy cows.

When you implement your heat abatement strategy what criteria should you use in selecting a quality supplier?

First do a little research.

Does your supplier do field testing on dairies with accredited universities and institutions to isolate the best applications for your environment and geographical conditions? Creditable suppliers work with industry leaders to conduct testing and do field trial applications to improve their product line and understand how they can apply the best results that return back to the dairy's bottom line.

Does your ventilation supplier have their products tested at the University of Illinois Bess Lab? Bess Lab conducts independent third party testing of agricultural fans. The test reports are published and available online, and provide data to help you make informed decisions.

Does your supplier provide High Efficiency (HE) models and at the static pressure your building requires ensuring successful heat abatement as efficiently as possible? The ventilation efficiency rating (VER) or CFM/watt, which is the calculation of the airflow per watt of electrical energy used, is the basis for many rebates and is a great start in determining what product you should use.

Quality fan suppliers should work with and be listed with energy auditors like ENSAVE. They should also note their product line with High Volume (HV) and High Efficiency (HE) models to help you chose the best product for your use. Remember the goal is to move enough air to alleviate heat stress.

In cross- and tunnel-ventilated barns it is important to understand all the factors that will affect static pressure. Static pressure is the resistance to airflow that a fan must overcome. Baffles, animals themselves, inlets, dirt build up on blades and intakes all can increase static pressure. The performance and VER are different at different levels of static pressure. Determining the correct static pressure your barn will operate at will determine the ventilation product you should buy based on testing from Bess Lab.

If you have an effective heat abatement system and you have not done a fall or spring fan check, now is the time. Clean and wash fan blades and shutters. Grease your bearings. Replace old evaporative cooling pads as well as clean your existing ones. Make sure all soaking lines and nozzles are working.

As you go through the year, remember to take the time to note hot spots that can be improved. Review the effects of heat in areas where you do not have heat abatement. Dry cows are often neglected. That neglect will cost you production and performance down the line. Before you know it fall will be here and even though you may want more summer, your cows will be happy it is cooler.

Please contact Schaefer Ventilation Equipment at 800-779-3267 or visit www.schaeferfan.com, for more information.