

# EXPERT ADVICE



Martin Léonard, Ph.D., agr.  
Ruminant Group Manager

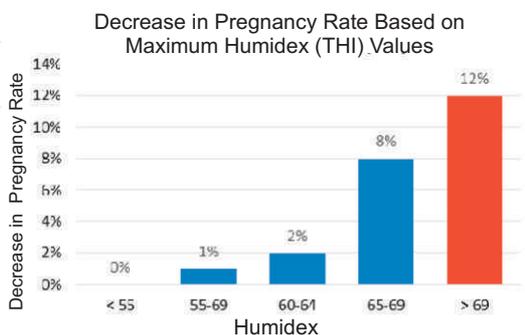
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## Heat also affects reproductive performance of your cows.

Last month, we talked about the influence of temperature on milk production of your cows during summer months and early fall. This month, let's take a look at another important impact of temperature, this time on reproduction.

We mentioned that cows begin to feel heat stress at a humidex of 68. Many studies show that cows producing more than 35kg of milk are affected by temperature and humidity when the humidex minimum is 65 or when the average humidex is above 68 for 17 hours per day. We know that the humidex has an impact on cows well before they will show signs of stress from the heat. In fact, studies show that reproduction will be negatively impacted when the humidex in a given day reaches only 55.

The graph here represents nearly 1,400 cows that were confirmed in calf by ultrasound. Heat stress was evaluated using the humidex maximum per day (considering maximum ambient temperature and relative humidity minimum for each day). The graph shows the decrease in gestation rate at increasing levels of humidex for cows between 21 and 30 days gestation. So, while milk production begins to be affected when the humidex is at 68, this study shows that reproduction will be negatively affected at a humidex much lower. Between a humidex of 65 and 69, we are talking about a decrease in gestation rate of 8%. We also know that embryonic death in the beginning of gestation increases when a cow's body temperature moves above 30.2°C.



Ref.: Garcia\_Ispuerto, T.Lopez-Gatius, P. Santolaria, J.L. Yaniz, C. Nogareda, M. Lopez-Bejar, T. De Rensis, Theriogenology 65(2006)799-807

It is also important to remember that it takes approximately 80 to 100 days for a follicle to develop into an oocyte that can be fertilized. In other words, cows that are bred next September or October will have eggs that were developed during the hot summer months!

Ask your Purina Dairy Consultant to show you the research results from COOL-Aid, a revolutionary additive that reduces the physiological changes associated with heat stress and body temperature. COOL-AID enables cows to maintain a lower body temperature and to resist the negative impacts on reproduction when the humidex rises as they do during Canadian summers.



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