Heat stress decreases milk production and reproductive success of dairy cows, and an inability to cool down negatively affects an animal’s welfare by potentially leading to thirst, hunger, and frustration. Existing research focuses on lying behaviour and DMI to evaluate cooling methods; however, less is known about how drinking behaviour could be used to assess heat stress. This study aims to evaluate how fan cooling during heat stress affects the drinking behaviour of indoor housed dairy cows. In August to September 2018, 72 lactating dairy cows were placed into 6 groups and alternately exposed to 3-day fan on and fan off periods over the course of 12 days. Animals were housed in pens with 12 freestalls; temperature and relative humidity were recorded above the pens. Video cameras were used to determine the proportion of time spent drinking while at the drinker and to scan for the location of the cows in the pen throughout the day. One electronic drinker per pen also recorded water intake and competitive behaviour. Preliminary results show that fan cooling reduced the amount of time cows spent in the drinker compared to the amount of time they spent drinking, and reduced the proportion of time cows spent in the area around the drinker. It is hypothesized that fan cooling will also lead to decreased water intake and competition. The initial results indicate that drinking behaviour may be a valuable tool to assess heat stress and cooling efficiency in dairy cows.

Themes:

Check (highlight) the most applicable theme according to the abstract.

| Innovation and Technology | Health and Wellness | Culture and Society | Sustainability and Conservation |

Comments: Very interesting research project. The author should define a few of the terms used (heat stress and DMI) for the lay audience to understand. Overall, well written. Since not all of the results have been analyzed, make that clear and talk about predicted results. It may be good to end the abstract with a conclusion statement or sentence on management implications/welfare. Good work!