

ALLEVIATION OF HEAT STRESS WITH TASCO IN DAIRY COWS

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ABSTRACT

The present study determined the impact of Tasco, *Ascophyllum nodosum*, on heat stress in dairy cows. Thirty-two Holstein cows were utilized in a randomized complete block design, during 63 days in summer 2008. Feed intake, milk production, respiration rate, body core and skin temperatures were measured for each cow. Ambient conditions in the free-stall barn were collected. The inclusion of 0.25% Tasco in the total mixed ration lowered dry matter intake and skin temperature for some days during the study, with no effect on milk yield. The same level of Tasco resulted in less of an increase in core and skin temperatures, as ambient temperature increased during the day. From the results, the inclusion of 0.25% Tasco may reduce heat strain of cows, maintaining lower body core and skin temperatures.

Typical effects of heat stress were observed in this study, including reduced feed intake and milk production, elevated respiration rate, skin and core body temperatures of dairy cows. Minimum vs. maximum or mean ambient temperature had more influence on the decline of dry matter intake and milk production. Cows that were more sensitive to heat stress were identified within the group, and compared to the least sensitive cows. Animals differed in their response to heat stress, either by utilizing different mechanisms to cope or by not responding to it. By identifying the most sensitive cows, actions could be taken in order to alleviate the negative impact of heat stress in the herd.