

## **Economic losses in dairy farms due to heat stress in sub-tropics:**

### **evidence from North Indian Plains**

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#### **SUPPLEMENTARY FILE**

#### **Calculation of THI for Karnal district of Indian state Haryana for the period 2001-2010**

Based on the availability of maximum and minimum temperature and relative humidity the we worked out THI based on the following equation (Ravagnolo *et al.* 2000) :  $THI = (9/5 \text{ temperature } ^\circ\text{C} + 32) - (11/2 - 11/2 \times \text{relative humidity}) \times (9/5 \text{ temperature } ^\circ\text{C} - 26)$ . Maximum, minimum and average THI were estimated; incorporating maximum temperature and minimum relative humidity (RH at 2.22 pm) in the equation gave maximum THI (THI\_Max), minimum temperature and maximum relative humidity (at 7.22 am) was used to work out minimum THI (THI\_Min), and average THI (THI\_Avg) was obtained using average temperature and average relative humidity.