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Interactive comment on "Ideas and perspectives: Heat stress: more than hot air" *by* Hans J. De Boeck et al.

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An elaborate response will follow in the full revision where we will address the points raised by referee 2. Two points of note:

- While we agree that physical processes governing heat exchange have been discussed in textbooks, we do not agree that this is established knowledge. Many heat wave and climate change studies still base hypotheses on heat stress and/or temperature effects on air temperatures rather than tissue temperatures. We felt that a concise manuscript clearly demonstrating the importance of other environmental variables on tissue temperatures would be very useful to many researchers (e.g. for improving their experimental set-ups). We will amend the manuscript to better introduce and discuss this.

- The field data resulted from a natural heat wave that occurred while we were setting up a field test of a new control for infrared heaters. Most sensors had been installed, but the wind sensor malfunctioned and had to be replaced later by another model, so that no data of wind speed were available during the short natural heat wave. This means that we cannot directly reconstruct the energy balance, limiting the amount of relationships we can empirically study. Still, we think that the data we do have, contribute to the manuscript. In the revised manuscript, we will address the referees' comments on the experimental part as best we can, although within the limitations posed by the set-up. The model is still the center piece of the study, and, as the earlier validation was convincing, should definitely bring out trends that the reader can trust.

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