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Modeling heat and Carbon Dioxide production of a broiler house at hourly time step [Modelisation horaire des productions de

by Wejden, C., Paul, R., Gérard, A., Alassane, K., Manuel, T., Christian,

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In **Significant Impact Groups:**

Housing and welfare \ Climate Housing and welfare

Species targeted: Poultry;

Age: Not stated;

Summary:

Models of heat production of broilers are used to design the thermal equipment to optimize climate control. The reference models are now around fifteen years old. Daily values of heat productions are deduced from the live weight of broilers and do not integrate the diversity of livestock systems and the genetic progress's evolution. Animal welfare and environmental issues now require simulations at an hourly time step or even shorter. Our objective is to propose an hourly model of heat, carbon dioxide and water vapor productions incorporating the zoo technical parameters specific of a commercial batch of broilers. To update the reference equations, experiments were performed so that models replicated conditions similar to commercial farming. We propose a new model design for heat production. The perspectives are to apply this modeling to climate control and thermal design of broiler houses.

Where to find the original material:

https://www.itavi.asso.fr/content/modelisation-horaire-des-productions-de-chaleur-et-de-dioxyde-de-carbone-en-elevage-de;

Country: FR