



260 Research paper

Measuring carbon dioxide concentrations in broiler houses
[Mesurage des concentrations en dioxyde de carbone en bâtiment

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In **Significant Impact Groups:**

Housing and welfare \ Climate Housing and welfare

Species targeted: Poultry;

Age: Not stated;

Summary:

The EU sets a limit of 3000 ppm of carbon dioxide (CO₂) concentration not to be exceeded for broilers, over the entire duration of the flock. Since then, CO₂ concentration sensors are developing in French poultry buildings. The purpose of this article is to provide methodological advices for continuous measurement of CO₂ concentrations in a broiler house, by looking at CO₂ commercial sensors. Despite being the best compromise to measure CO₂ concentration at animal's level according to at the end of the flock at 80 cm +/- 20 cm of height, this can underestimate CO₂ concentrations in case of high CO₂ productions by animals and litter. These results suggest using more than one CO₂ sensors for continuous measurements in poultry barns. According to the sensors's tests, first level investment should be in high-performance sensor and in its maintenance than purchasing an additional sensor.

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Where to find the original material:

[https://www.itavi.asso.fr/content/mesurage-des-concentrations-en-dioxyde-de-carbone-en-batiment-poulets-de-](https://www.itavi.asso.fr/content/mesurage-des-concentrations-en-dioxyde-de-carbone-en-batiment-poulets-de-chair#:~:text=L'arr%C3%AAt%C3%A9%20minist%C3%A9riel%20du%2028,toute%20la%20dur%C3%A9e%20du%20lot.:)

[chair#:~:text=L'arr%C3%AAt%C3%A9%20minist%C3%A9riel%20du%2028,toute%20la%20dur%C3%A9e%20du%20lot.:](https://www.itavi.asso.fr/content/mesurage-des-concentrations-en-dioxyde-de-carbone-en-batiment-poulets-de-chair#:~:text=L'arr%C3%AAt%C3%A9%20minist%C3%A9riel%20du%2028,toute%20la%20dur%C3%A9e%20du%20lot.:)

Country: FR