

# Science in the Service of Animal Welfare

## Priorities around the world



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## EFFECT OF TYPE OF FLOORING ON PIG LYING BEHAVIOUR AND SALIVARY CORTISOL LEVELS

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Indoor flooring for pig housing is generally slatted in warmer climates in southern Europe since it provides greater thermal comfort, but it is unclear what type of partial slatting or continuous solid flooring pigs prefer, nor whether type of flooring has significant effects on welfare. In this study, the behaviour and stress levels of fattening pigs were compared using two types of partly-slatted housing, one with concrete flooring and concrete slats and the other with epoxy resin flooring with metal slats. The behaviour of 112 pigs housed in 16 pens was described using scan sampling (8 hours per pig). Salivary cortisol was measured in 1 pig per pen on three different days during fattening (morning and afternoon) for a total of 96 samples, and another salivary cortisol sample was taken after weighing each pig, 0h, 1h and 2h after weighing (stressful situation) near the end of fattening in 3 pigs per pen, for a total of 144 samples. Significant differences were found in the behaviour of pigs depending on the floor type. Pigs spent more time in a recumbent lateral position on the epoxy resin flooring, especially on metal slats, than on the concrete flooring or concrete slats (temperature during the study averaged 22°C, range 19-30°C). There were no differences in baseline cortisol levels for pigs on either flooring but, after the weighing, the cortisol level of the animals housed in the resin flooring showed a normal decreasing tendency whereas the level of cortisol of animals housed in the concrete flooring showed a rising tendency (Figure 1).

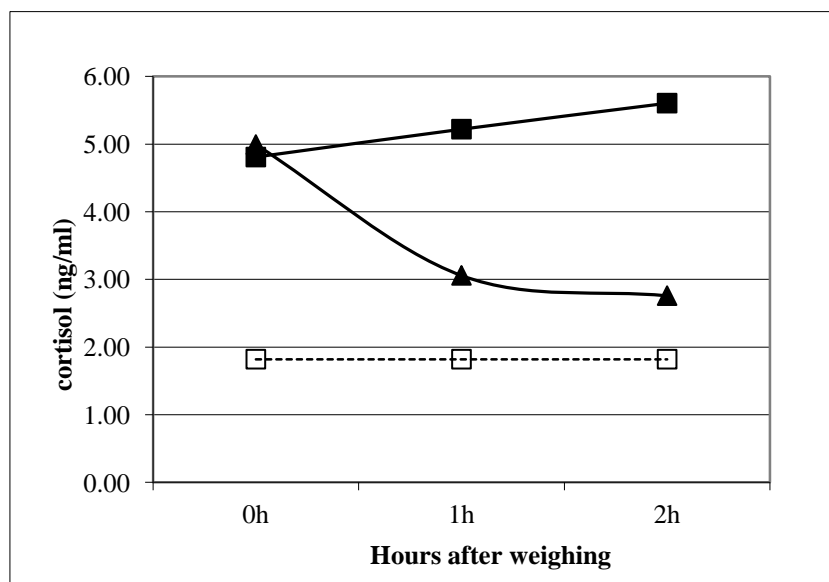


Figure 1. Salivary cortisol concentrations in pigs kept on cement flooring with partial cement slats (■), pigs on resin flooring with metal slats (▲) and control pigs on cement and resin flooring (□, not weighed).

