

### **Sodium sulphite (SoS) detoxification of deoxynivalenol (DON)-contaminated maize and its impact on physiological parameters and vaccination response in fattening pigs**

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The aim of the present study was to examine the effects of the mycotoxin deoxynivalenol (DON) and its detoxification with sodium sulphite (SoS) on the responsiveness of the adaptive immune system and unintended effects of the detoxification strategy in pigs.

Ninety-six barrows were fed a diet containing either 10% uncontaminated or DON contaminated maize that were previously wet preserved with one of three SoS levels (0, 2.5, 5.0 g/kg maize) and 15g propionic acid/kg maize (20% moisture content) for 63-70 days to detoxify DON. Groups were further subdivided: half of the animals were vaccinated against influenza or injected with physiological saline as placebo. Blood samples were taken at different time points. Various haematological parameters, thiamine, nitric oxide (NO) and influenza vaccine titres were analysed. Data were analysed using mixed models.

Thiamine and NO in plasma were differentially affected by SoS-level dependent on DON-presence in feed. No significant effect of treatment on parameters of the haemogram were determined. All pigs receiving influenza vaccination established significant antibody titres irrespective of treatments.

The results demonstrated that neither dietary DON nor SoS treatment of the feedstuff resulted in an alteration of the response of the adaptive immune system with respect to antibody titers.

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