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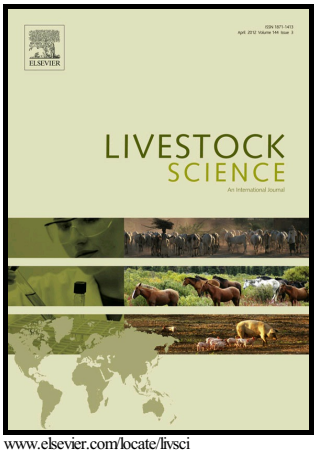

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Impact of diet on bacterial lipopolysaccharides in equine feces and blood

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Abstract

Feeding horses with high-starch diet can lead to alteration of their hindgut and fecal bacteria composition, with a potential shift in gram negative and positive bacteria. Gram-negative bacteria contain LPS in their outer membrane, which can translocate into bloodstream following hindgut microbial disturbances. The aim of our study was to evaluate if diet composition (high-fiber or high-starch diets) can modulate the LPS concentration in equine feces and plasma using an innovative measurement method. Six horses were used in a longitudinal study composed of three consecutive periods. During the first period (H1; 3 weeks), they were fed 100% hay. After a gradual transition, they received during the second period (HB; 4 weeks) a diet composed of