

International Conference on Livestock Nutrition

August 11-12, 2015 Frankfurt, Germany

Effects of high fibre and its source on the growth and slaughter performance of pigs fed maize soybean diets fortified with Roxazyme® G²

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The effects of high fibre (250 g kg⁻¹ dry matter (DM) total dietary fibre (TDF)) from different feeds on growth and slaughter performance were investigated in pigs fed maize-soybean diets fortified with Roxazyme® G². The added fibre sources were maize (*Zea mays*) cobs (MC), soybean hulls (*Glycine max*) (SH), brewer's (*barley*; *Hordeum vulgare* L) grains (BG), Lucerne (*Medicago sativa*) hay (L) or wheat (*Triticum aestivum*) bran (WB). A standard diet (141 g kg⁻¹ DM TDF) served as a control. Diets were mixed in duplicate, and one mixture was fortified with 200 mg Roxazyme® G² (RX) kg⁻¹ feed. *In vitro* methods were used to estimate fibre fermentability. The study used 72 intact Large White X Landrace, male pigs (32.0 ± 5.6 kg live weight). The diets were fed *ad libitum* for 70 days in a complete randomized design with a 6X2 factorial arrangement of the treatments. Digestibility was estimated at 65-70 kg LW using Cr₂O₃ as the indigestible marker. Depending on the source, high fibre reduced (P<0.05) feed intake (BG and L), the digestibility of organic matter (WB, BG, MC), protein (BG, MC, WB), fat (WB, L), phosphorus (BG), ash (MC, SH) and energy (all fibres). Maize cob increased (p<0.05) the feed: gain ratio. Lucerne reduced (P<0.05) daily gain and dressing % and, similar to WB, increased (p<0.05) lean %. Roxazyme® G² did not affect any of the measured parameters. The results supported a fermentable-fibre approach to maintain nutrient digestibility on fibrous diets. Supplementation with Roxazyme® G² was not justified.

Biography

F Fushai completed his PhD in 2014 from the University of South Africa. He is a lecturer in the Department of Animal Science at the University of Venda, South Africa. His main research interest is in animal nutrition and sustainable agriculture.

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