Intérêt chez le porcelet d'un critère caractérisant l'encombrement des aliments

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Characterization and interest of the feed swelling capacity for the weaned piglet

An analytical method was developed to describe feedstuffs by their swelling capacity (SwC) in water. The SwC is the volume (in ml) occupied by 1 gram of dry matter (DM) of the ground raw material after 6 hours of contact with water. Two trials were set with 2 x 240 piglets between 42 and 69 or 70 days of age. Four (trial 1) and five (trial 2) experimental diets were prepared varying by their SwC ; the different SwC levels (3.4 to 3.8 and 3.3 to 4.1 ml/g of DM in trials 1 and 2, respectively) were obtained by different incorporation rates of sugar beet pulp, extruded wheat, extruded soyabean. In trial 1, daily feed intakes were higher for feeds with intermediate SwC ($P < 0.05$); the growth rate was related to the feed intake, feed conversion ratios being unchanged, but piglets fed with the intermediate dietary SwC obtained by sugar beet pulp incorporation, displayed less diarrhoea. In trial 2, feed intakes did not differ significantly, but piglets fed with the intermediate SwC (obtained with a mix of the three raw materials) also displayed the best health status. In conclusion, SwC seems to be an interesting parameter to be considered in diet formulation for piglets.