Effet d'une nouvelle combinaison xylanase/β-glucanase sur les performances zootechniques du porcelet nourri avec des régimes à base de blé et d'orge

Rosil LIZARDO (1), Augustine OWUSU-ASIEDU (2), Alexandre PERON (3), Anne-Marie DEBICKI-GARNIER (3), Bertrand MESSAGER (4), Joaquim BRUFAU (1)

(1) IRTA, Mas Bover, crta Reus-Morell, km 3.8, 43120 Constantí, Espagne
(2) Danisco Animal Nutrition, Westmound drive, Waukesha, WI 53186, USA
(3) Danisco Animal Nutrition, Marlborough, SN8 1XN, Royaume-Uni
(4) Altilis Nutrition Animale, 31 rue Pistouley, 33500 Libourne, France

alexandre.peron@danisco.com

Effect of a new xylanase/β-glucanase combination on the performance of piglets fed wheat/barley-based diets

The efficacy of a new enzyme preparation containing both xylanase (xyl) and β-glucanase (bgl) activities was investigated in weaned piglets fed wheat/barley-based diets. One-hundred-and-twenty crossbred Landrace x Duroc weaned piglets were allocated to one of three dietary treatments, with 10 replicate pens per treatment (4 pigs/pen). The treatments (T) comprised a control diet either unsupplemented (T1) or supplemented with 2 levels of the xyl/bgl product to supply guaranteed minima of 1220 IU xyl and 152 IU bgl /kg feed (T2 - 0.1 kg/MT) or 2440 IU xyl and 304 IU bgl /kg feed (T3 – 0.2 kg/MT). Diets were offered as a mash during pre-starter and starter periods and the trial lasted 42 days. At the end of the trial, faeces samples were collected and the faecal digestibility of major nutrient and non-starch polysaccharides (NSP) fractions was determined. Results showed that xyl/bgl enzyme supplementation improved piglet growth performance ($P<0.05$) during the starter period, while feed efficiency was improved during the starter and overall periods ($P<0.01$). Digestibility of total NSP, arabinose and xylose was significantly improved with the inclusion of the higher dose of xyl/bgl enzyme in feeds. These benefits could, at least partly, be associated with the breakdown of both soluble and insoluble fibre fractions of wheat and barley grains in piglet's digestive tract. In conclusion, this study demonstrated the efficacy of a new xylanase and β-glucanase feed additive for piglets and the convenience of its use in cereal-based diets.