Media Release

CRC for an Internationally Competitive Pork Industry

July 29, 2010

DIABETIC TEST TO HELP PORK PRODUCERS

A simple glucose meter, or glucometer, commonly used by diabetics to measure blood glucose levels, is set to help Australian pork producers more efficiently feed their pigs.

Supported by Australia's Pork Cooperative research Centre (CRC), Dr Peter Sopade of the University of Queensland has developed a simple, robust, efficient technique, using a glucometer, which measures the amount of glucose and therefore digested starch, produced by digestive enzymes.

It was one of the key outcomes of the Pork Cooperative Research Centre (CRC) project, *Processing Methods for Improving the Utilisation of Cereal Grains by Pigs*.

Principal Investigator, Professor Mike Gidley, said developing a rapid in-vitro starch digestion technique for animal feed involved examining pig digestion of cereal grains based on the need to maximise available energy for pig growth from grain-based feeds.

Dr Sopade said that with cereals in pig diets potentially containing 17MJ/kg energy from starch, it was important to quantify how easily that starch would be digested.

The new method, based on glucometry, could speed up analysis of starch digestion and help processors, nutritionists, pork producers and ingredient suppliers maximise energy delivery and therefore feed conversion ratios.

To investigate the suitability of the glucometer, we looked at changes in processing, raw material, formulation, grain particle size and digestion time. We assessed the variability of detection speed, accuracy, sensitivity, and analyte volume, as well as developing an equation to calculate digested starch.

Dr Sopade said the new method was easy-to-use, making it an invaluable tool for anyone involved in feed formulation and manufacture.

Existing techniques for in-vitro starch digestion, particularly in measuring glucose released, are expensive, cumbersome and slow. Our team at the University of Queensland, along with the Pork CRC, identified a need for a simpler, more robust, faster method and what we developed is ten times faster.

Dr Sopade said the new technique could be established as part of quality control in feed processing and was exciting for anyone considering assessing digestion and choosing ingredients and additives to maximise energy delivery to pigs from cereal feed grains.

www.porkcrc.com.au

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