



Established and supported under the Australian Government's Cooperative Research Centres Program

## Pork CRC Research Summary



### 1B-110 - Commercial real-time application of NIR calibrations for the measurement of digestible energy

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Development and proceeding use of the NIRS AusScan® Digestible Energy calibrations has identified that there is significant variation between batches of cereals. The greatest benefit from application of these calibrations will be obtained through real-time analysis of cereal cereals prior to incorporation into diets.

An NIR-Online® X-One inline NIRS was installed at Ridley Agriproducts Murray Bridge feedmill on the cereal transfer line. This line transports all cereals entering the mill to the hammer mill. The system logged data for 12 months of mill operation from March 2010 through to March 2011, recording multiple parameters including results from the AusScan® calibrations for Pig Faecal Digestible Energy (FDE) and Ileal Digestible Energy (IDE).

Considerable variation of all parameters was seen across all the measured cereal types including Wheat, Barley, Triticale, Oats, Lupins and Peas.

The cost of 1MJ/kg of cereal DE content is considered to be between \$15 and \$20/Metric Tonne. With the pig industry striving for greater feed efficiency, this highlights the need for better control of DE variability within finished feeds. Ideally cereal DE content variations would be contained to within 0.5MJ/kg. Data logged by the NIR-Online® NIRS clearly shows that based on 1MT milled Wheat batches multiple batches over a 2 hour period would benefit from formulation adjustment.