



R&D Snapshot

Effects of dietary methyl donor supplements in pigs

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Purpose:

- To investigate if dietary supplementation of methyl donors can manipulate the homocysteine (HCY) balance and provide a unique opportunity to improve production efficiency in pigs.

Background:

- Methyl donors are derived from food and are important in the regulation of metabolic processes including hormone signalling, protein synthesis and cell growth. High plasma HCY levels indicate an imbalance in the methyl donor pathway, which may negatively affect growth efficiency, health and/or body condition of pigs. Betaine, choline and methionine are methyl donors and their inclusion in pig diets may allow manipulation of the HCY balance, providing a unique opportunity to improve production efficiency in pigs.

Take home messages:

- High homocysteine (HCY) levels were found in commercially raised pigs in Queensland and South Australia
- The inclusion of betaine (0.125 and 0.25%), choline (0.15 and 0.3%) and methionine (0.2%) in diets reduced plasma HCY concentrations but not to below the accepted normal levels
- A reduction in HCY did not result in improved production efficiencies in this study.

Additional information:

- Contact Lechelle van Breda at lechelle.vanbreda@australianpork.com.au or 02 6270 8823.

APL Project 2015/034 – Survey of the methyl donor status and the effectiveness of dietary methyl donor supplement in Australian pigs.

