

Symposium – gut health in the pig

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Introduction

'Gut health' is a term that has only relatively recently entered the lexicon used in pig production. Its genesis essentially coincided with the events in Europe associated with restrictions and then a ban on the use of antibiotic growth promotants in diets. Since the late 1990s, the expression has been omnipresent in the pig literature as a plethora of opinion, products and research have appeared on the subject. The factors and conditions involved in 'gut health' are multi-factorial, complex, and in general incorrectly interpreted. In addition to enteric disease, other influences will also impact upon 'gut health' such as responses occurring in the gastrointestinal tract after weaning, any changes that might occur after a change in diet, and the situation in the gut before, during and following a disease challenge. Unfortunately there is some confusion as to what an appropriate definition of 'gut health' actually is, and this has probably caused some confusion and misinformation in relation to the issue.

The first paper in this symposium by John Pluske and colleagues attempts to address this question. The paper provides a broad overview of 'gut health' and introduces a working definition, which essentially relates to a generalised condition of homeostasis in the gastrointestinal tract in view of the various challenges and perturbations that occur to, and in, this important organ system. This paper addresses some key and salient aspects associated with gastrointestinal health with a particular focus on enteric disease, which is where most of the attention in relation to 'gut health' has been focused. A prime example of this is with post-weaning colibacillosis and the use of replacement feed additives to antibiotic feed additives.

The second paper in the symposium by Colm Moran provides an industry-oriented and pragmatic approach to how replacement products to antibiotic feed additives could be developed. An understanding of the various mechanisms of action of antibiotic feed additives is a requisite first step in such a process, and although understanding in this area is not complete, sufficient evidence exists to allow the development of such products.

The overall aim of this symposium is to inform and educate the attendees in an area of pig science that we have all heard and read about a lot in recent times. We hope that this symposium will set a platform for discussion of 'gut health' in the context of the Australasian pig industry.