

R&D Snapshot

Review of innate immunity in pigs

Investigator: Assoc Prof John Pluske, Murdoch University

Purpose:

- Conduct a literature review to identify nutritional, environmental and animal selection factors that may reduce or enhance the capacity of the pigs' immune system to resist disease impacts
- Use the findings to identify ways to stimulate the innate immune system, thereby reducing antibiotic use and enhancing pig performance.

Take home messages:

- Develop an on-farm strategy to ensure the immune system of commercially raised pigs is not excessively challenged by, and is primed to respond appropriately to, pathogenic organisms. These practices include:
 - Maintaining desired air quality
 - Ensuring pigs are not held in environments below their lower critical temperatures
 - Formulating and feeding diets that do not limit an immune response due to nutrient deficiencies or excesses, with a ratio of n-6:n-3 polyunsaturated fatty acids of 4:1 or less, to ensure that the majority of nutrients are digested in the proximal small intestine
 - Developing and implementing an appropriate vaccination schedule for sows and progeny.
- This review has been tabled at APL Specialist Group 3 Nutrition, Health and Physiology and Pork CRC Expert Scientific Group 2 Herd Health Management meetings to develop R&D priorities.

Additional information:

- Click [here](#) to view the full report
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