

Sensitivity of ideal protein nutrition to coccidiosis challenge

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This Ph.D. project aims to test the overall hypothesis that the supplementation of selected amino acids (AA) could improve the resilience and resistance of broilers raised during gut health challenges. Resilience is defined as the ability of birds to maintain growth performance during the challenge or tolerate the challenge without any clinical signs, while resistance refers to the ability of a variety of anatomical and physiological systems, including the immune system, to reduce pathogen load. Its outcomes are expected to inform the ideal protein pattern for optimal resilience and resistance. This will serve as a model for any monogastric animal species, despite being tested in broilers, with ideal protein defined as the requirement for each AA expressed as a ratio to lysine, the first limiting AA in pig diets. The expectation here tested is that this ratio is sensitive to sub-clinical challenge, modelled through exposure to reused litter.