

DIETARY LYSINE REQUIREMENTS FOR FINISHER PIGS

LYSINE REQUIREMENTS OF PIGS FROM 20 TO 100 KGS LIVEWEIGHT

Project Participants

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Problem

The modern pig has an increased requirement for amino acids relative to energy to allow building of protein for lean growth. There are many factors which influence the amino acid requirements of growing pigs with the major ones being genetics, sex, feed intake, liveweight and whether or not the pig is castrated. Feeding below the recommended levels of amino acids, especially lysine, can result in reduced growth.

Background

A change in consumer needs in recent years has driven a need for reduced fat on pork cuts. As such, pigs today deposit more protein and less fat. This change has resulted in a shift in dietary requirements for pigs. Lysine is the first limiting amino acid in pig diets and it is common to include synthetic lysine in diets to allow their requirements to be met. It is crucial to determine and provide the appropriate level of dietary lysine in pig diets to ensure lean growth is maximised and feed costs are minimised.

Value for Producers

Appropriate levels of lysine in the diet will ensure lean growth of pigs is maximised and feed costs are minimised, improving productivity and profitability.



Research

The first study involved two experiments which were conducted to determine the lysine requirements of entire male and female pigs of Australian PIC genetics.

The second study involved an experiment to determine the lysine requirements for immunocastrated male and female pigs.

The aim of these studies was to determine the optimal available lysine per megajoule (MJ) digestible energy ratio (Av Lys:DE) for entire and immunocastrated male and female finisher pigs.

Results

These studies confirmed that the modern, lean pig requires higher levels of dietary lysine. The suggested available lysine requirements per MJ digestible energy (DE) for entire male and female pigs at various bodyweights are provided in Table I below.

Appropriate adjustments to the recommended values should be made based on factors such as genetics, temperature, pen size and feed intake.

The growth performance of both immunocastrated male and female pigs from 60 to 95 kilograms does not appear to be enhanced when lysine concentrations are raised above 0.64 g Av Lys:DE.

Recommendations

Table I outlines the suggested available lysine requirements per MJ digestible energy (DE) for entire male and female pigs at various bodyweights. In addition to this, producers are encouraged to separate feeding programs for male and female pigs where possible.

Table 1: Suggested available lysine for entire male and female pigs at different bodyweights.

Body weight (kg)	Entire male (g Av. Lys/MJ DE)	Female (g Av. Lys/MJ DE)
20	0.80	0.78
35	0.77	0.76
50	0.65	0.60
65	0.60	0.55
80	0.53	0.50

More Information

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