IMPACT OF A BALANCED AMINO ACID PROFILE ON BROILER PERFORMANCE

Friedhelm Koch[1], Peter J.A. Wijtten[2], Andreas Lemme[1], Dirk J. Langhout[2]
[1]*Degussa AG, Feed Additives, Rodenbacher Chaussee 4, 63457 Hanau, Germany*
[2]*Provimi B.V., P.O. Box 5063, NL-3008 AB, Rotterdam, The Netherlands*

Summary. Three trials have been conducted to evaluate the application of the concept of the "Ideal Protein" (IP) in broiler diets.

Two dose-response experiments with male broilers were conducted to study the effect of graded dietary amino acid (AA) levels on performance. The objective of the third experiment evaluated interactions between balanced dietary amino acid level and grow out period. According to the IP concept the ratios between the essential AA and lysine were identical in all diets within an experiment. Data revealed that current broiler breeds have a high performance potential which could be realised by optimising the AA supply of the birds. Even IP levels higher than 140% of current recommendation increased performance. However, especially amino acid supply during the early live showed the strongest impact on the performance in subsequent phases and therefore on final performance. Higher supply with balanced amino acids compared to current recommendation during the starter phase might be meaningful to ensure high performance and profitability.

Keywords: Broiler, Amino acid requirement, Ideal protein, dose-response trial