**Low dietary crude protein diets formulated on digestible amino acids achieve higher growth performance and carcass yields of finishing broiler chickens**

Excessive dietary crude protein (CP) can be detrimental to broiler health and environment. By formulating on digestible amino acid (AA) levels with available feed grade AA, a significant reduction in dietary CP can be achieved. However, the extent of the reduction and its effects on broiler performance, meat yields and litter quality still need to be investigated. The present experiment aims at testing the effect of low CP diets in 2 broiler finishing feed phases on performance, uniformity, foot pad lesions, litter quality and carcass characteristics. In total, 1,600 day-old broilers were assigned to 10 replicates of 4 treatments in a commercial broiler house managed by Zootest. In treatments 1 and 2, broilers were fed from 21 to 28 days either a standard (19%) or a low (18%) dietary CP content and then a common finisher diet from 21 to 35 days. In treatments 3 and 4, broilers were fed from 28 to 35 days either a standard (18%) or a low (17%) dietary CP content. All low dietary CP diets contained L-Val (next limiting AA after Thr). Reducing dietary CP level significantly increased feed intake and body weight gain, independent of the tested period. FCR was improved only when low CP diet was fed from 28 to 35d. Breast meat yield was significantly increased in low CP diets and no other criteria were affected by diet composition. In conclusion, lowering dietary CP level can be applied in practical broiler formulas with positive effects on growth performance and carcass characteristics.