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BOOK OF ABSTRACTS

PS4 - Solution to improve the nutritional value of feed**PS4-020 Effect of low-level calcium and phosphorus diets supplemented with calcium pidolate on broiler body weight and rate of culled birds**B. Iglesias¹, M.V. Charriere¹, V. Fain Binda¹, J. Melo²¹Sección Avicultura, EEA Pergamino, Instituto Nacional de Tecnología Agropecuaria (INTA), Pergamino, Argentina, ²Departamento de Tecnología, Universidad Nacional de Luján (UNLu), Luján, Argentina

Decreasing dietary Ca may improve phosphorous (P) utilization, while an excess of Ca may aggravate a P deficiency. Therefore, different researchers have shown that a moderate reduction in dietary Ca had no deleterious effects on broiler performance. Besides, calcium pidolate (PCa) is known as an ingredient directly promoting the absorption of calcium and indirectly phosphorus. The aim of this study was to evaluate the effect of low-level Ca-P diets with PCa supplementation on broiler body weight and rate of culled birds. A total of 342-day-old male broilers chicks (Cobb-500) were allocated in floor pens in a completely randomized block design (9 replicates/treatment). Pre-starter (1-7 d), starter (8-21 d), grower (22-35 d) and finisher (36-42 d) diets were used for dietary treatments. Control diets (CTRL) were formulated according to requirements used by the industry in South America (0,94-0,63 and 0,49-0,32, for CaT and Pav, respectively). Low Ca and P diets (LCP) were formulated to obtain a 20-36% reduction in total Ca and available P, and no differences in metabolizable energy and four digestible amino acids (Lys, Met+Cys, Thr). PCa (PIDOLin PCa, Dietaxion) was included on-top between 0-21 d at 300 ppm in the LCP diets. Birds were weighed weekly, and the mortality recorded daily. Parametric data were analyzed using ANOVA and non-parametric data through the Chi-square Test. The pen was considered the experimental unit. There were not significant differences ($P>0.05$) in body weight at 21 d and at the end of the experiment. Mortality and culled birds were not statistically significant at the end of the experiment ($P>0.05$), but there was a significant difference between treatments in the rate of culled birds due to leg problems ($P<0.1$), with a lower rate for LCP broilers supplemented with PCa (1.2 vs 2.3%). It can be concluded that total Ca and available P concentrations can be reduced by 20-36% in broiler diets supplemented with PCa to obtain similar body weight and livability results. The use of PCa during 0-21 d could explain the tendency to improve the rate of culled birds due to leg problems.