Effect of Se supplementation on chick growth and development

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Se plays an important role in regulation of many different functions in the body. The aim of the present work was to evaluate effects of Se supplementation on growing chicks. Six groups (30 chicks in each group) of day-old broilers were used. The control group (C1) was fed a commercial diet without Se or sunflower oil supplementation; The second control (C2) group was supplemented with 3.5% of sunflower oil; Groups 3: C2 + 0.2 ppm of organic selenium (Sel-Plex\textsuperscript{®}, Alltech Inc., USA) Group 4: C2 + 0.2 ppm Se (Sel-Plex) and 0.2 ppm Se (selenite); Group 5: C2 + 0.4 ppm Se (Sel-Plex) supplementation and group 6: C2 + 0.4 ppm Se (Sel-Plex) and 0.4 ppm Se (selenite). Cumulative feed consumption over the first 4 days of age was maximal in groups 3 and 5. For the first two weeks, both feed consumption and conversion followed the same pattern: the best feed conversion was achieved in groups 1 and 3, the worst in group 6. The relative mass of the intestine was similar in all groups except for group 3 were it was significantly higher. The relative mass of the duodenum in the intestine varied in relation to selenium level and form, with group 3 being significantly higher than group 1. It was concluded that the level and form of selenium may alter intestinal morphology in broiler chicks.