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## Subscription

### Veterinari Medicina

Retention of cadmium in the tissues of broiler chicks by dietary supplemental microbial phytase

T. Bilal, E. Erçag

Veterinari Medicina, 48 (2003): 199-205

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The objective of this study was to investigate the effect of Ca : total(t) P ratio, vitamin C and microbial phytase on broiler performance and cadmium retention of broiler. In experiment, 288 day-old male broiler chicks (Cobb) were randomly assigned to 12 treatment groups, 3 replicates of 8 chicks each. The study was carried out for 42 days. The basal diet supplemented calcium, phosphorus, cadmium (0.5 and 5 mg/kg), zinc (20 mg/kg), vitamin C (0 and 1 g/kg) and microbial phytase (0 and 600 PU/kg feed). Differences among diets fed to individual experimental groups affect either body weight gain or feed intake and

conversion after the 3 weeks and at the end of the experiment ( $p < 0.05$ ). Cadmium and microbial phytase supplement to diet caused a significant increase of cadmium concentration in the tissues examined. There were significant differences in tissues concentrations of cadmium ( $p < 0.05$ ) among the groups fed diets supplemented. In conclusion, addition of 600 PU feed of phytase per kg of diet compensates this effect and lowers the cadmium burden by up to 60%.

### **Keywords:**

chicks; cadmium; Ca : P ratio; liver; kidney; phytase; performance; vitamin C; tibia

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