

**Effects of dietary oil sources, calcium and phosphorus levels on growth performance, carcass characteristics and bone quality of broiler chickens**

**ABSTRACT**

The study investigated the effects of varying dietary calcium (Ca) level and oil sources on the growth performance and carcass quality of broiler chickens. A total of 378, 1-day-old birds (Cobb 500) were fed either 6% palm oil, soybean oil (SO) or linseed oil (LO) in combination with three dietary levels of calcium (1.00%, 1.25% and 1.50%) for 6 weeks. Birds fed SO had higher body weight (BW) compared with those fed LO ( $p < .05$ ). However, feed efficiency, carcass and bone quality were similar among the oil treatments. Regardless of the oil source, chicken fed diets containing 1.50% of Ca had lower BW compared with those fed 1.00% and 1.25% of Ca. In contrast, birds fed 1.25% of Ca had significantly higher ( $p < .05$ ) bone quality than those fed 1% of Ca. It can be concluded that increasing the level of calcium up to 1.25% improved bone quality regardless of the type of oil.

**Keyword:** Broiler chicken; Oil; Calcium level; Growth performance; Bone quality