

## Body composition of two commercial broiler strains subjected to early feed restriction or feeding with dried chick excreta

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### Abstract

Mini Bro and Red Bro broiler chickens were used to study the effects of feed restriction or feeding with dried chick excreta (DX) on carcass composition (CC), plasma very low density lipoproteins (VLDL), and triglycerides (Tg) concentrations. Feed treatments were: (1) controls fed ad libitum, (AL); (2) 50% feed restriction of AL-controls for 2 weeks starting at 1 week of age, (FR); (3) identical to AL controls except that dried chick excreta replaced 20% of the finishing diet during Weeks 5 and 6 of age (DX).

At 4 weeks of age, carcass lipid was significantly ( $P < 0.01$ ) increased compared with the AL controls. The carcass composition, at 4 and 7 weeks of age, was not affected by sex or strain. At 7 weeks of age, males contained significantly more ( $P < 0.01$ ) protein and moisture and numerically less fat than females. Treatment had no significant effect on VLDL whereas Tg concentrations were significantly ( $P < 0.05$ ) affected by treatment. However, no significant sex and strain effects were observed on plasma VLDL or Tg concentrations. Carcass composition was not affected by treatment.

Phenotypic correlations between body weight (BW) and carcass weight (CW), in both strains were highly significant ( $P < 0.01$ ) and all exceeded 0.8. Neither plasma Tg or VLDL concentrations showed any consistent correlations with BW. Correlations between AFW and plasma VLDL or Tg concentrations were inconsistent. It is concluded that DX can be added to finisher diets without adverse effects on carcass composition. Evidence that plasma VLDL or Tg concentrations are a good measure of fatness is lacking.