



Thesis Abstract

Genetic study of abdominal fat deposition and performance, and carcass and body composition traits in a male broiler line

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This research was conducted to estimate genetic and phenotypic parameters of abdominal fat and performance, and carcass and body composition traits in a male broiler line provided by Agroceres Ross Melhoramento de Aves S.A. The broilers belonged to a sib test program, in which data from brothers and sisters of the individuals to be selected, called elite flock, are collected. A total of 30,273 farm data of chickens from an elite flock and their sibs were donated by the company and 6167 processing data from sibs of the elite flock were collected. The traits analyzed were: body weight at juvenile selection, ultrasound records of pectoral muscle (US1 and US2), feed conversion ratio, feed efficiency, feed intake, live weight at processing, carcass weight, breast weight, leg weight, carcass yield, breast yield, leg yield, abdominal fat weight, heart weight, gizzard weight, liver weight, intestine weight, heart score, and liver score. (Co)variance components were estimated by the restricted maximum likelihood method, using the MTDFREML software. Heritability coefficients estimated were mostly moderate, and the heritability of abdominal fat weight was high, which suggests that this trait can be selected. The genetic and phenotypic correlation coefficients estimated varied according to the trait studied.

Key words: Abdominal fat pad; Sib test; Heritability; Correlation; Genetic parameters