

Determination of the Optimum Weight/Age and Composition of Broiler in Tropical Environment.

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Abstract:

In a study to determine optimum slaughtering age of broilers in Nigeria, 605 Cobb broilers were raised on floor pens, the birds were weighed weekly and 2 birds/pens were slaughtered fortnightly from six to sixteen weeks. Body weight, carcass weight, abdominal fat thickness and fat weight were measured. Internal body fat was determined by ether extraction of homogenized whole carcass less bone. Two way analysis of variance, simple and multiple regression and correlation analysis were carried out.

Data on costs, revenue and net returns were obtained by questionnaire survey of poultry farms around Ile-Ife. The data were summarized and analysed graphically.

Body weight, carcass weight, abdominal fat weight, abdominal fat weight as % live weight, abdominal fat thickness, total body fat, %total body fat, internal body fat and internal body fat as carcass weight were significantly affected by sex and age ($P < 0.01$). Feed efficiency and feed conversion ratio were significantly affected by age ($P < 0.01$). Highly significant correlations ($P < 0.01$) were obtained among all body traits.

Highly significant regression coefficients ($P < 0.01$) were obtained by simple regression of internal body fat on carcass weight, body weight abdominal fat weight and fat thickness. Multiple regression analyses showed that, the regression was including fat thickness after abdominal fat weight and fat weight after carcass weight, Total body fat prediction can be reliably based on carcass weight abdominal fat weight for broilers between 6 - 16 weeks.

Economics analysis revealed that profit is made when broilers till 16 weeks. When broilers are sold at a fixed price, the n point of slaughter is close to 12 weeks, but when broilers on weight basis, the optimum marketing age is just above and the physiological body data showed that fat deposition above after 12 weeks.

Keywords: Broiler

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