

**PERFORMANCE OF MEAT-TYPE CHICKEN REARED
UNDER DIFFERENT STOKING DENSITIES**



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*Thesis submitted in part fulfillment of the
requirements for the degree of*

MASTER OF VETERINARY SCIENCE

in

LIVESTOCK PRODUCTION AND MANAGEMENT

to the

**Tamil Nadu Veterinary and Animal Sciences University,
Chennai.**

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2006

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CERTIFICATE

This is to certify that the thesis entitled **“PERFORMANCE OF MEAT-TYPE CHICKEN REARED UNDER DIFFERENT STOCKING DENSITIES”** submitted in part fulfillment of the requirement for the degree of **MASTER OF VETERINARY AND ANIMAL SCIENCE** in **LIVESTOCK PRODUCTION AND MANAGEMENT** to the Tamilnadu Veterinary And Animal Sciences University, Chennai is a record of bonafide research work carried out by Miss **T.JAYALAKSHMI** under my supervision and guidance and that no part of this thesis has been submitted for award of any other degree ,diploma ,fellowship or other similar titles or prizes and that the work has not been published in part or full in any scientific or popular journal or magazine.

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ABSTRACT

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Year	: 2006

An experiment was conducted with straight run commercial broiler chicks for a period of forty two days to study the effect of different stocking densities under deep litter system of management on production performance of broilers, carcass characteristics and environmental parameters. A total of 240 day old broiler chicks were distributed in four treatment groups in deep litter with stocking densities of 900, 750, 600 and 450 cm² per bird with three replicates per treatment and twenty chicks in each replicate.

The broilers reared at 900 cm² per bird recorded the highest ($P<0.01$) body weight, weight gain, feed consumption and better feed conversion ratio followed by 750, 600, 450 cm² per bird density.

Broilers reared at the densities of 900, 750 and 600 cm² per bird groups did not reveal any significant differences in the per cent eviscerated and ready-to-cook yield. But Per cent New York dressed yield was found to be higher ($P<0.01$) in the 750 cm² per bird density. At same time meat yield was found to be highest ($P<0.01$) in the 900 cm² per bird density group. All the remaining parameters did not show any statistical difference between different stocking densities.

No significant differences were observed in livability and climatic variables at all the densities studied.

The broilers reared at 900 cm² per bird recorded lower litter moisture level, air ammonia and litter microbial load (total bacterial, coliform and mould count) followed by 750, 600, 450 cm² per bird density. All this data are statistically significant ($P < 0.01$).

Correlation between weight gain and other parameters like litter moisture, air ammonia, litter microbial load is influenced by floor space. The highest broiler weight of 1702.8 g was obtained in the lower density (900 cm² per bird) group.

The net profit per bird and net return per kg live weight was better in lower (900 cm² per bird) density group broilers.

Key word: broilers, stocking density, production parameters, litter moisture and microbial load, air ammonia level, climatic variables, economics.