PROFITABLE UTILISATION OF WHITE LEGHORN MALE CHICKS FOR MEAT

THESIS

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by
FAROQUE RAHAMATHULLA SHERIFF, B.V.Sc.,

Department of Poultry Science
MADRAS VETERINARY COLLEGE
MADRAS-600 007.

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CERTIFICATE

This is to certify that the thesis entitled "Profitable Utilisation of White Leghorn Male Chicks for Meat" submitted in partial fulfilment of the requirements for the degree of Master of Veterinary Science, in Poultry Science to the Tamil Nadu Agricultural University, Coimbatore is a record of bonafide research work carried out by Faroque Rahamathulla Sheriff, under my supervision and guidance and that no part of this thesis has been submitted for the 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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SUMMARY AND CONCLUSIONS

Two experiments were conducted utilising White Leghorn male chicks of 'Forsgate' strain hatched during the month of July and October (1979) at Poultry Research Station, Madras. Four hundred and forty male chicks from July hatch were randomly divided into four dietary treatment groups and four hundred and sixty two male chicks from October hatch were randomly divided into seven dietary treatment groups respectively in first and second experiment. These two experiments were carried out to find out the effect of different dietary energy protein levels on the body weight, body weight gains, feed consumption, feed efficiency, mortality, ready-to-cook dressed yield, giblet yield, proximate composition of ready-to-cook dressed carcass, suitability for preparation of Tandoori chicken and economics of raising White Leghorn male chicks upto 10 weeks of age.

Increasing the dietary protein level from 20 to 26 percent maintaining the energy level constant at 2400 Kcal/Kg ME enhanced the body weights and body weight gains per day. The highest body weight of 835 g was obtained in birds reared on 26 percent protein and 2400 Kcal/Kg ME at 10 weeks of age. The increase of energy level over 2400 Kcal/Kg ME (i.e. 2550 or 2700 Kcal/Kg ME) at 20, 23 and 26 percent protein levels was found to depress body weight and body weight gains per day.

Comparatively feed consumption was low when high energy diets are fed (26 percent protein with 2550 Kcal/KG ME and 20 percent protein with 2700 Kcal/Kg ME) than the low energy diets (2400 Kcal/Kg ME at 20, 23 and 26 percent protein levels). Increased dietary protein levels of narrow energy protein ratios had resulted in improved feed efficiency (92:1 and 98:1 at 26 percent protein level, 104:1 at 23 percent protein level and 120:1 at 20 percent protein level).

The mortality pattern from 0 - 10 weeks of age was not due to the dietary treatments involved in the study.

The ready-to-cook dressed yield percentage did not show any significant difference among groups studied. When the increments of energy were high (2400 to 2800 Kcal/Kg) lesser ready-to-cook dressed yield percentage was obtained at tenth week of age as compared to eighth week of age. Increasing the dietary energy level at a particular protein level, the giblet percentage was found increased. Giblet percentage at ten weeks of age was significantly lower to that of eight weeks of age.

Moisture percentage in ready-to-cook dressed carcass was higher in eight week old birds than the ten week old birds. The reciprocal increase or decrease of either

protein or energy levels in carcass were found associated with the dietary levels of these in the diet fed.

In general increasing the dietary energy levels at a particular protein level, the score values for tenderness, juiciness, flavour and acceptability were found increased. Though the score values were lesser at ten weeks as compared to that of eight weeks of age it was still found suitable for preparation of Tandoori chicken.

In the second experiment, birds reared on diets with enhanced protein levels and low energy (20:2400, 23:2400 and 26:2400) gave considerable net return from male White Leghorn chicks both at eighth and tenth week of age (Rs. 1.11, 1.23, and 1.67 at 8th week),(Rs. 1.35, 1.41 and 1.70 at 10th week). However in the first experiment poor body weights contributed to poor returns.

White Leghorn male chicks can thus be profitably reared for table upto tenth week of age on diet containing 2400 Kcal/Kg ME with 20 to 26% protein.