

PERFORMANCE OF BROILERS FED DIETS WITH
VARYING ENERGY AND PROTEIN LEVELS

U.L.P. Mangalika and K.K. Pathirana
Dept. of Animal Science, Faculty of Agriculture,
University of Ruhuna.

Using a completely randomized design, 144 day-old broiler chicks were divided into 12 uniform groups of 12 birds each. It was a 2 (levels of energy) x 3 (levels of protein) completely cross-classified factorial experiment with two replicates. Same energy levels of 3000 and 3200 Kcal ME/kg were used during starter and finisher stages. Protein levels during starter and finisher stages were 18.8%, 21.0%, 23.0% and 15.5%, 18.0%, and 21.0%, respectively. Lowest feed intake ($P < .05$) was with the lowest protein level during both stages. It was highest ($P < .05$) with intermediate protein level during the starter stage and for the entire experimental period. Feed intake non-significantly ($P > .05$) increased with decreasing energy levels. None of the treatments affected ($P > .05$) weight gain during starter stage. It was higher ($P < .05$) with the high energy level during the finisher stage and for the entire experimental period. Feed conversion was more efficient with the high energy level during both stages. None of the treatments affected ($P > .05$) cost/gain. Despite the high feed cost at high energy and protein levels, the cost/gain tended to decline, particularly with increasing protein levels at the high energy level. Time to reach 1.3 Kg live weight was less ($P < .05$) at the high energy level; the shortest time was the highest protein level (39 days) while the range for the rest was 43.5 to 45.0 days. Indications are that rations with high energy and protein levels, although costlier, are more economical.