An experiment was conducted to study the effect of choice feeding on the performance of two strains of growing pullets. A complete randomized design with $2 \times 2 \times 2$ factorial arrangement was used in this experiment and each treatment consisted of 4 replicates.

Three hundred and twenty 8-week old birds of two strains (one hundred and sixty birds of Super Harco or Hi-line) were divided into thirty two groups of ten birds each and were fed either a complete mash (14.6% CP; 12.13 Mj ME/kg) or a choice of diets (concentrate 27.3% CP; 8.84 Mj/kg and corn). Birds were also offered either insoluble grit (sand) or soluble grit (oyster shell) in a separate container.

The results of the experiment indicated strain differences, but body weight, weight gain, feed consumption and feed conversion ratio of the birds of the same strain at 20 weeks of age were not affected by the systems of feeding or grit supplementation.

However, Super Harco birds consumed significantly more feed (32.8%), had 43.1% higher body weight and 48.7% higher weight gain than Hi-line birds ($p < 0.05$). Birds of Super Harco or Hi-line strains offered a choice of diets consumed as much energy as the birds fed a complete mash diet. Furthermore, in a choice situation, Hi-line birds consumed as much protein as the birds fed a complete mash diet, however, the Super Harco birds consumed significantly more protein (11.7%) than those fed a complete mash diet ($p < 0.05$).

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