

## Effects of Five Feed Withdrawal Periods on Feed Intake, Growth Performance and Internal Organ Weights of Young Broiler Chicks

Atapattu NSBM and Sudusinghe HS

Department of Animal Science, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya

### Abstract

Objective of this study was to determine the effects of five feed withdrawal (FW) periods on the feed intake (FI), growth performance and internal organ weights of young broiler chicks. Twelve days old broiler chicks (n=90) in 30 pens were subjected to five FW periods (0, 2, 4, 6 and 8h), commencing from 0800h, from day 13 to 23. All birds were fed a commercial broiler starter diet. Water was given *ad libitum*. On day 23, one randomly selected bird from each cage was slaughtered to determine the weights of the internal organs and tibia ash contents. Compared to *ad libitum* feeding (0h of FW), up to 6h of FW did not significantly reduce the live weight on day 23, weight gain from day 13-23 and the total FI. However, eight hours of FW significantly reduced FI compared to all other FW periods and the live weight and weight gain compared to 2, 4 and 6h of FW periods. Feed conversion ratio (FCR), tibia ash contents and the weight of the liver, heart, gizzard, pancreas and, the length of the small intestine were not significantly affected by the dietary regimens. Eventhough the feed cost was significantly reduced when feed was withdrawn for eight hours, the feed cost per unit weight gain was similar across all treatments. It was concluded that up to six hours of FW during day time does not negatively affect the FI, growth performance, tibia ash contents and internal organ weights of young broiler chicks age 13-23 days.

**Keywords:** broilers, feed restriction, feed withdrawal, growth