

## Healthy Feeding and Drinking Troughs for Profitable Intensive Deep-Litter Poultry Farming

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**Abstract :** The mainstream contemporary approach to controlling the impact of diseases among poultry birds rely largely on curative measures through the administration of drugs to infected birds. Most times as observed in the deep liter poultry farming system, entire flocks including uninfected birds receive the treatment they do not need. As such, unguarded use of chemical drugs and antibiotics has led to wastage and accumulation of chemical residues in poultry products with associated health hazards to humans. However, wanton and frequent drug usage in poultry is avoidable if feeding and drinking equipment are designed to curb infection transmission among birds. Using toxicological assays as guide and with efficiency and simplicity in view, two newly field-tested and recently patented equipments called 'healthy liquid drinking trough (HDT)' and 'healthy feeding trough (HFT)' that systematically eliminate contamination of the feeding and drinking channels, thereby, curbing widespread infection and transmission of diseases in the (intensive) deep litter poultry farming system were designed. Upon combined usage, they automatically and drastically reduced both the amount and frequency of antibiotics use in poultry by over > 50%. Additionally, they conferred optimization of feed and water utilization/elimination of wastage by > 80%, reduced labour by > 70%, reduced production cost by about 15%, and reduced chemical residues in poultry meat or eggs by > 85%. These new and cheap technologies which require no energy input are likely to elevate safety of poultry products for consumers' health, increase marketability locally and for export, and increase output and profit especially among poultry farmers and poor people who keep poultry or inevitably utilize poultry products in developing countries.

**Keywords :** healthy, trough, toxicological, assay-guided, poultry

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