

Prangthip Maneesaard 2013: Feed Loss Reduction in Closed System of Broiler Chicken Husbandry. Master of Science (Environmental Technology and Management), Major Field: Environmental Technology and Management, Department of Environmental Technology and Management. Thesis Advisor: Assistant Professor Jukkrit Mahujchariyawong, Ph.D. 103 pages.

This research was application of the principle of cleaner technology (CT) to assess the feeding process of broiler chicken husbandry, and to investigate some causes of the problems and create the improving options. The feed loss reduction in feeding process was benefit not only for economics, but also for environment. The initial assessment found that the main capital of feeding the chickens was broiler chicken food. Mass balance was conducted in the specific assessment, the result showed the feed loss occurred during the feed filling stage which workers put in feed bucket, the feed eating stage which chicken dropped from feed bucket on floor and into pond below, and the feed changing stage which wasted the feed at the points of feed type changing and final feeding. The total of the feed loss was 839.4 kg/ crop as 1.90%. One option of feed loss reduction showed that installation of supporting sheets size 70x70 cm under all feed buckets 390 sheets saved 1,498.32 kg per year as 19,841.88 baht per year, and reduced greenhouse gas emission 1.50 tCO₂e per year. The another option which controlled amount of feed at concerning points, reduced waste of feed as 3,537.6 kg per year as 48,785.76 baht per year, and greenhouse gas emission 3.60 tCO₂e per year was reduced. The cost of these simple options was very low and had 2 months and 6 days payback period. Therefore, this feeding method can be applied to small and medium sizes of broiler chicken husbandry.

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