

**UTILIZATION OF BROILER MEAT PROCESSING WASTE TO  
DEVELOP A COMPOST**



**BY**

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## ABSTRACT

Broiler industry in Sri Lanka has shown a phenomenal growth over the recent past. There are three grandparent farms and nearly 33 registered breeder farms operating in Sri Lanka. Moreover, there are more than 15 chicken meat processors in the country. "Meat washing" is one of a main steps in Broiler production. As a result of this water become contaminated. Broiler companies not only face environmental and social problems, but also they expend huge amount of money to avoid the bad effect of contaminated water. Therefore, an experiment was conducted to reduce the environmental and social problem, save the money to remove the waste and also gain additional income through process waste into compost. Veehena farm, Mahavewa was the experimental site for this study. Compost heaps were prepared by using waste sludge from meat washed water, *Gliricidia* leaves, straw ash and poultry litter. The compost heaps was prepared with 100%, 75%, 50% and 25% level of sludge. Three replications per one treatment were allocated in a Factorial Completely Randomized Design. The treatments were T<sub>1</sub>-100 % sludge, T<sub>2</sub>-75% sludge + 8.3% *Gliricidia* leaves + 8.3% straw ash + 8.3% poultry litter, T<sub>3</sub>-50% sludge + 16.6% *Gliricidia* leaves + 16.6% straw ash + 16.6% poultry litter, T<sub>4</sub> -25% sludge + 25% *Gliricidia* leaves + 25% straw ash + 25% poultry litter. The T<sub>4</sub> recorded the highest N content  $1.25 \pm 0.01\%$  and the least  $0.42 \pm 0.01\%$  was in T<sub>1</sub> in the 8<sup>th</sup> week. Highest P content  $1.20 \pm 0.005\%$  obtained in T<sub>4</sub> and least  $0.41 \pm 0.005\%$  in T<sub>1</sub>. The T<sub>4</sub> recorded the highest  $1.27 \pm 0.01\%$  K content and the least  $0.42 \pm 0.01\%$  was in T<sub>1</sub>. There were also significant difference between the treatments on pH and moisture content at  $p < 0.05$  level. This experiment revealed that 25% broiler waste sludge mixed with equal amounts of *Gliricidia* leaves, paddy straw ash and poultry litter could be used to make N, P and K rich compost.

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