

Thesis Title	A Study on Production of Midge (Chironomus spp.) Larvae and Mosquito (Culex spp.) Larvae Using Hen Manure and Fine Sand
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#### ABSTRACT

Hen manure is the organic waste from animal farm, which has rich of nutrient content. It, therefore, can be used widely in agricultural activity. This study has the objective to use hen manure for culturing midge and mosquito larva and also to find out the pond with and without fine sand at the bottom which affect to the propagation of the larva.

A study on production of midge and mosquito larva in cement round pond was conducted at Suphanburi

agricultural college. Randomized Complete Block design was used with two factors; hen manure and fine Sand, two fine sand levels of 0 (without) and  $47.5 \text{ litres/m}^2$  and three hen manure levels of 300, 400 and  $500 \text{ gm/m}^2$ , with 3 replications. Trials were carry out from start to the sixteenth day.

The result indicated that there were no significant difference in total value of midge and mosquito larva. The production of midge and mosquito larva were appearance inverse each other; the treatment combination with sand and  $300 \text{ gm/m}^2$  hen manure was appearance the highest of the midge larva production, while the highest production of mosquito larva was appearance for the treatment combination without sand and  $500 \text{ gm/m}^2$  hen manure. The ratio of the two treatments by weight of midge and mosquito larva were  $1.1:1.0$  ( $17.44 \text{ gm/m}^2:15.83 \text{ gm/m}^2$ ) and  $1.0:64.9$  ( $0.58 \text{ gm/m}^2:37.62 \text{ gm/m}^2$ ), respectively. The weight of midge larva in treatment combination - with sand and  $300 \text{ gm/m}^2$  hen manure was shown statistically significant higher than the other treatments ( $P<0.05$ ). While the weight of mosquito larva in every treatment was no significant difference except between treatment combination - without sand and  $500 \text{ gm/m}^2$  hen manure and treatment combination - with sand and  $400 \text{ gm/m}^2$  hen manure and control and between treatment combination - without sand  $400 \text{ gm/m}^2$  hen manure and control which were statistically significant ( $P<0.05$ ). In studing of the two factors; sand and hen manure, influence upon the midge and mosquito larva, there were shown the

significant difference in midge larva yield between 300 gm/m<sup>2</sup> hen manure and the other levels ( $P < 0.05$ ) and were also shown the significant difference in mosquito larva yield between with and without sand ( $P < 0.05$ ). Moreover, there were no interaction between the two factors to the midge and mosquito larva production.

The finding indicated that there was only the treatment combination - with sand and 300 gm/m<sup>2</sup> hen manure which was beneficial return. It, therefore, was shown that midge and mosquito larva could be grown together and could be also chosen ratio of midge and mosquito larva production according to the requirement.