

**DEVELOPMENT OF A SUITABLE CULTURE MEDIA  
FOR MASS CULTURE OF *Moina macrocopa***

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by

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## Abstract

Ornamental fish farms depend on live feeds to maximize the production and most of the farmers are using *Artemia naupli* as a live feed. *Artemia* cysts are imported from other countries and are quite expensive hence development of low cost live feed as an alternative to *Artemia* is done. *Moina macrocopa* is identified as such species that could be used to reduce the cost of live feeds. Two experiments were conducted over a four month period to investigate possible culture media and its concentrations suitable for culture of *Moina macrocopa* and find out the most suitable low cost culture medium and its concentration for mass culture of *Moina macrocopa*. Mineralized cow dung, steamed cow dung, 15 min. boiled chicken manure, 30 min. boiled chicken manure and 1 hr. boiled chicken manure were the investigated low cost culture media which are readily available in Sri Lanka. All media were tested with both with and without  $1 \times 10^4$  cell per 1 ml of *Chlorella vulgaris* separately. Four different concentrations as  $5 \text{ g l}^{-1}$ ,  $10 \text{ g l}^{-1}$ ,  $15 \text{ g l}^{-1}$  and  $20 \text{ g l}^{-1}$  from each media were prepared. Possible culture media can be developed into mass culture were  $5 \text{ g l}^{-1}$  and  $10 \text{ g l}^{-1}$  of both mineralized chicken manure and steamed chicken manure with and without *Chlorella*,  $10 \text{ g l}^{-1}$  and  $15 \text{ g l}^{-1}$  of 1 hr. boiled chicken manure with *Chlorella* and  $20 \text{ g l}^{-1}$  of 1 hr. boiled chicken manure with and without *Chlorella*. All those media gave higher yield with *Chlorella* than without *Chlorella*. According to the final results,  $10 \text{ g l}^{-1}$  of mineralized cow dung with *Chlorella vulgaris* was the best culture medium to obtain highest total count of *Moina macrocopa* among the tested culture media.

**Key words:** *Moina macrocopa*, chicken manure, cow dung, *Chlorella vulgaris*