# Potential NIChE in Boosting Aquaculture Industry

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**ABSTRACT**

**Introduction**

Production of *M. rosenbergii*, particularly in Malaysia, is increasing to meet the growing demand for protein source. However, the production of the *M. rosenbergii* post larvae (PL) usually less than 60 %. The causes of high mortality rate are due to the bacteria infection (*Vibrio* sp. and *Aermonas* sp.), stress and cannibalism among the larvae. Cannibalism and stress of the larvae can be solved by optimizing the feeding regime or applying Vitamin C in the culture water. The common practice to manage bacterial infection is by applying chemical antimicrobial. However, chemical antimicrobial residue is known to have negative effect on human. *Moringa oleifera* and *Curcuma longa* are known to have antimicrobial properties. The antimicrobial properties and high protein content in *M. oleifera* and *C. longa* make it suitable to be used as *M. rosenbergii* larvae feed to improve their immune system. In addition, short shelf life of the egg custard is time consuming and require additional cost for hiring staff. The objective of this study is to improve egg custard formulation and optimize its storage condition and packaging.

**Materials and Methods**

Proximate analysis was carried out on *M. oleifera* and *C. longa* before and after feed formulation. Later, the feed were subjected for optimization of storage condition and packaging.

**Results**

Result from this study showed potential application of *M. oleifera* and *C. longa* to improve egg custard formulation based on data on nutrition profile. Meanwhile, the improved packaging and storage method has reduce bacterial growth on the treatment sample compared to the control group.

**Conclusion**

NIChE improved formulation, storage condition and packaging has potential to be used in aquaculture industry.

# Keywords: Giant Freshwater prawn larvae, egg custard, *Moringa oleifera, Cucuma longa.*