

**Malaysian herbs as feeding attractants and enhancers for the giant freshwater prawn
(*Macrobrachium rosenbergii*) and the whiteleg shrimp (*Litopenaeus vannamei*)**

ABSTRACT

Feeding attractiveness of 21 fresh herbs was examined for the giant freshwater prawn (*Macrobrachium rosenbergii*) and the whiteleg shrimp (*Litopenaeus vannamei*) at different growth stages in tanks. The feeding attractant and enhancement were assessed by behavioural observations of the test animals in response to pelleted feeds incorporated with the herbal extracts in different concentrations. For *M. rosenbergii*, peppermint (*Mentha piperita*) and dokudami (*Houttuynia cordata*) were the most attractive herbs at all stages, and garlic (*Allium sativum*) strongly attracting to the juveniles but only weakly to the adults, postlarvae and larvae. Peppermint significantly enhanced feeding of *M. rosenbergii* at all stages except for the larvae. Garlic was a significant feeding enhancer for *M. rosenbergii* juveniles and postlarvae. The inclusion of the herbal extract at high concentrations had a negative effect on the feeding. As far as *L. vannamei* is concerned, the red chilli (*Capsicum annum*) was the best feeding attractant and ginger (*Zingiber officinale*) and peppermint were moderate attractants for adults and juveniles. While galangal (*Alpinia galangal*), ginger and yellow onion (*Allium cepa* sp.) enhanced feeding in *L. vannamei* adults, but red chilli, garlic and peppermint did not enhance feeding. Evidently, the strong feeding attractants were not necessarily effective feeding enhancers. The incorporation of several herb extracts at higher concentrations caused a negative effect on the feeding of the test animals. This could be due to the presence of feeding deterrents in the herb such as saponins which are known to lower food palatability in insect, decapod crustaceans and fishes. More long-term work is warranted to determine if inclusion of feeding enhancing herbs in artificial feed promotes growth performance of the shrimp.