

**Report on the dissertation entitled “Studies on the effect of commercial probiotic application in normal and stunted freshwater prawn *Macrobrachium rosenbergii* in cultured ponds” submitted by Ms C. Vasumathi as a mark of completion for Ph.D. degree in the Periyar University.**

General comments:

The dissertation and its contents are more than adequate for awarding the Doctor of Philosophy in Zoology.

Specific comments:

In this Doctoral Research study, Ms. Vasumathi made an attempt to correlate several features relating usefulness of the native ingredients, its cost-effectiveness and the feasibility. In its support an enormous amount of chemical and physical data provided for which the candidate certainly deserves much appreciation. Detailed introduction to fresh water farming of prawn *Macrobrachium rosenbergii* provided in chapter 1. Extensive literature reviews on soil, water conditions to achieve the better growth and yield of the giant freshwater prawn were also provided. The chemical and physical parameters of the probiotic, control pond were studied to compare and to provide best pond condition, soil, water condition to produce a high yield and commercial value fresh water prawn. Histopathology studies were well planned and carried out to compare the histology of eyestalk, intestine, gonad and androgenic gland of normal adult male and stunted male. This study looked at various biochemical parameters on the normal and stunted male are interesting and certainly provides valuable information for the commercial farming of fresh water prawn. This examiner finds this research study to be an outstanding piece of innovative research. This research study is well thought-out and executed with a great extent. Also, the thesis is well written and articulately composed with adequate background information which is well said in the introduction chapter. The methodology applied is clear and organized in a sequence to address the goal of the planned research study. Results were presented well to establish the various farming condition to achieve a high yield fresh water prawn. In conclusion, Ms. Vasumathi's research study provides

novel scientific data on various farming condition to produce better growth and high yield fresh water prawn and fish, which in turn provides a better commercial value for commercial fresh water farmers.

**I HIGHLY RECOMMEND** that this thesis to be accepted and Ms C. VASUMATHI be awarded the degree of Degree of Doctor of Philosophy in Zoology, Periyar University, Salem, Tamil Nadu, India. I congratulate both the doctoral scholar Ms. Vasumathi and Professor Dr. P. Dhanapakiam for their novel contribution to the science.

**Few specific comments may, however, be directed at the candidate during viva interface:**

1. Based on economic analysis, the net income from control pond is Rs. 58K and the probiotic pond is Rs. 261K. The net income from the probiotic pond 4 fold when compare to the control pond , which is very good for the fresh water prawn farmers. Have you made any attempt to educate the fresh water prawn farmers about this findings? Or have you contacted the agriculture department of State \ Central Government to notify your findings and the benefit of the probiotic pond? .
2. This study was carried out at Vishnuvakkam, near Chennai, would you expect the similar result in other parts of Tamil Nadu, with different soil, water and weather condition? What measures can be taken to mimic this conditions?
3. Regarding the growth aspect. No statistical analysis to compare the growth results are listed.!