

Tahitian *Isochrysis* aff. *galbana*, and *Pseudoisochrysis paradoxa* were tested for larval *Penaeus orientalis*. The algae were semi-continuously cultured in 5,000 ml carboys with 4,000 ml of Guillard f/2 medium, under 2,000 lux continuous light and under aeration. The algal density was up to 1×10^7 cell/ml. Rearing experiments were conducted in round tanks with diameter of 45 cm. Algal density was controlled at 1×10^5 cell/ml in the course of the experiments. The larval density was 18 individual/100 ml; water temperature, 21-24°C; pH, 7.5-7.7; and sea water specific gravity, 1.019.

The results showed that of five clones used, Tahitian *I.* aff. *galbana* and *D. zhangjiangensis* proved to be the best. It took 9-11 days for nauplius I to develop into mysis I with survival rate of 73.5% and 73.4%, respectively.

The Tolerance of *Penaeus monodon* Eggs and Larvae to Fungicides against *Lagenidium* sp. and *Haliphthoros philippinensis*

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The *in vivo* effect of mycostatic levels of fungicides against the fungi *Lagenidium* sp. and *Haliphthoros* sp. were tested on *Penaeus monodon* eggs and larvae. Hatching rate and survival of nauplii, zoeae, mysis and postlarvae exposed to 10 mg/l Benzalkonium chloride, 1 mg/l Clotrimazole, 1 mg/l Crystal Violet, 10 mg/l 2,4-D, 10 mg/l Daconil, 20 mg/l laundry detergent, 1 mg/l Econazole nitrate, 10 mg/l Resiguard, 0.2 mg/l and 10 mg/l Treflan-R, 0.01 mg/l and 0.2 mg/l Trifluralin were monitored daily for 96 hr in a static bioassay in glass aquaria. Results showed that all test chemicals had no inhibitory effect on hatching rate but survival rate of hatched nauplii was significantly reduced in most treatments except that of 0.2 mg/l Treflan-R. Tests with zoeae, mysis and postlarvae indicated that 0.2 mg/l Treflan-R and 0.01 mg/l and 0.2 mg/l Trifluralin did not adversely affect survival. In addition, Benzalkonium chloride caused no significant mortalities among exposed mysis.

Growth and Survival of *Penaeus monodon* Postlarvae with Different Feeding Regimes and Stocking Densities in Earthen Brackishwater Nursery Ponds

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The effect of different stocking densities (50, 100 and 150/m²) and two feeding regimes (natural food, consisting

mainly of lablab, and natural food plus artificial diet) on the growth and survival of *Penaeus monodon* postlarvae (PL₄ to PL₅) were evaluated in eighteen 40 m² earthen brackishwater nursery ponds using tidal water exchange for a period of 45 days.

Results of the experiment indicated that the effect of different stocking densities was highly significant ($P < 0.01$) on growth but not on survival for the two feeding regimes. Likewise, no interaction effect was discerned. Shrimps given artificial feed (Treatments II, IV and VI) obtained higher mean weight gains of 1.55, 1.17 and 1.05 g, respectively, than those that were not given artificial feed (I-1.44 g, III-0.92 g, and V-0.66 g). Similarly, those reared with artificial feed attained better survival of 41.62% (II), 67.44% (V) and 52.14% (VI) compared to shrimp that were not given artificial feed (I-42.53%, III-54.61% and V-46.90%).

An exploratory economic study showed that the nursery operation gave promising results in all treatments. High rate of investment (ROI) was obtained to give a safe margin for the risk involved in this kind of business. Among all treatments, treatment V had the highest ROI of 693% and shortest payback period of 0.19 years.

Intermediate Culture of Chinese Prawn Without Feeding in Nursery Ponds

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The aim of the experiments is to find a new way to accomplish intermediate culture of the penaeid prawn in nursery ponds. Experiments have been carried out in prawn farms in Haiyang County, Shandong Province. Prawn fry were stocked at high density in a nursery pond. Commercial fertilizer was added to the nursery pond to fertilize the pond water as nutrients for the planktonic and benthic organisms. The prawn fry in the pond fed only on the available natural food organisms without any special feed supply and grew normally. The survival and growth rate of the prawn fry are discussed.

Survival, Growth and Production of White Shrimp *Penaeus indicus* in Brackishwater Ponds

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This study was conducted in 4 one-ha ponds, 70-100 cm deep and 2 two-ha ponds, 40-70 cm deep to evaluate the survival, growth and production of white shrimp, *Penaeus indicus* stocked at 50,000/ha and cultured within a period of 90 days with supplementary feeding.