

Minh Duc Nguyen 2010: Research and Development on Abalone Culture in Vietnam: Applications of Knowledge from Thailand. Master of Science (Marine Science), Major Field: Marine Science, Department of Marine Science. Thesis Advisor: Associate Professor Saran Petpiroon, Ph.D. 96 pages.

The hatchery production of larvae and juveniles of the tropical abalone (*Haliotis asinina*, Linnaeus 1758) were reported. Techniques were described for broodstock management, controlled spawning by exposure to air at 30<sup>0</sup>C for 2 h. Female abalone spawned with a mean of 1,202,900 larvae. Fertilised eggs measured 180 µm in diameter. With 4.16 % survival rate was obtained during larval rearing. Larvae passed trochophore, veliger and creeping stages after 30 hours and were induced to settle on a mat of diatoms *Nitzschia sp.* containing. The settled spats and juveniles were reared to mean length of 11.44±2.6 mm for 3 months in a rearing tank where they were ready to settle onto shelter transparent film plates of *Nitzschia sp.*

Effects of stocking density and initial size on growth and survival of abalone, *H. asinina* were investigated under the suspended plastic cages. In the first experiment, four stocking densities i.e. 40, 60, 80 and 100 pcs/cage were used. After 6 months, growth in term of shell length, weight and survival rate of abalone at 60 pcs/cage were the highest. The stocking density of 60 pcs/cage was chosen for the second experiment where abalone of three initial size ranges i.e. 4-5, 7-8, and 10-11 mm in term of shell length were investigated in the same manner as the first experiment. It was found that abalone with initial size range of 10-11 mm showed the best survival rate with the value of 82%. Under this circumstance, it is suggested that abalone with the initial size range of 10-11 mm in shell length should be stocked at the density of 60 pcs/cage for the first 6 months of grow-out period under this suspended plastic cages system.

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Thesis Advisor's signature

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