COMPARATIVE STUDY ON QUALITY OF EGG AND EARLY VELIGER IN DONKEY' S EAR ABALONE (Haliotis asinina, Linnaeus 1758) ACHIEVED FROM NATURAL AND HATCHERY - RAISED BROODSTOCK

Tanes Poomtong\textsuperscript{1}* Sakon Sangpradub\textsuperscript{2} and Nopadol Phuwapanish\textsuperscript{1}

\textsuperscript{1}Prachuap khiri khan Coastal Fisheries Research and Development Center 448 Moo 1 Tambol Kleng Wan, Muang District, Prachuap khiri khan Province 77000 Tel. 03-2661-398 E-mail : cf-prachuap@dof.in.th
\textsuperscript{2}Coastal Aquatic Feed Research Institute, Department of Fisheries

ABSTRACT

The donkey's ear abalone (Haliotis asinina, Linnaeus, 1758) broodstock 7.8±0.22 cm shell length and 89.25±0.35 g weight per individual from natural and hatchery-raised 2.5 years of 15 males and 35 females, respectively. These abalone were introduced to breed once per two months for 5 times. Comparatives study on sperms and eggs releasing rates, quantities and qualities of eggs from spawning through early veligers were investigated.

The results show that abalone broodstock from hatchery-raised gave higher sperms and eggs releasing through normal egg rates than abalones collected from natural habitats as followed: sperm releasing rates were 63.14±18.50 and 52.77±31.83%, respectively, egg releasing rates were 46.98±10.57% and 34.18±28.53%, respectively. Normal eggs rates were 84.15±16.45% and 59.29±28.01%, respectively. Both results were statistically difference. (P<0.05)

Hatching rates of swimming veligers from hatchery-raised broodstock higher than natural broodstock as followed: 74.95±5.31% and 69.57±10.25%, respectively. Both results were statistically difference. (P<0.05) Both male and female abalones broodstock from hatchery-raised had higher survival rates than abalones from natural broodstock. For males were 93.33% and 86.66%, respectively. Females were 97.14% and 88.87%, respectively. Natural broodstock show better results in sperms, eggs releasing and quantity of eggs through swimming veligers, only the former period and large number of spoiled eggs were accepted when breeding periods are prolonged.

Hatchery-raised broodstock could replace broodstock collected from natural habitats probably due to they could better adapted themselves to the hatchery environments.

Key words: Abalone, Broodstock

*Correspondence