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Geoduck aquaculture potential in New Zealand

Dung V Le and Andrea C Alfaro

Auckland University of Technology, New Zealand

Geoduck species (*Panopea spp.*) is the largest burrowing extant clam in the world. Geoduck is currently sold at \$15-\$20 USD per kg landing value and four to five times higher in restaurants. Two species of geoduck which have been found in New Zealand are *Panopea zelandica* and *P. smithae*. Known populations of *P. smithae* are very rare while *P. zelandica* are found in several places. *P. zelandica* has been harvested at Golden Bay since 1900s, however due to the unknown population size in Golden Bay and the low-density estimates in other areas, the big scale of geoduck fishery in New Zealand might be not suitable. Hence, aquaculture of geoduck might offer better management of the supply and quality control. Geoduck has been identified as a new potential species to add to the country's aquaculture exports which are expected to reach NZ \$1 billion by 2025. However, the viable knowledge to develop geoduck aquaculture is very limited. Before 2010 we only knew where *P. zelandica* distributed when they spawned in the wild and the larvae were able to survive in the lab. Since 2010 the collaboration research group between Auckland University of Technology and Cawthron Institute investigated in broodstock conditioning, larval rearing, spat nursery and juvenile grow-out. Up to 2015 we achieved to condition geoduck broodstock in the hatchery and to produce geoduck seeds at small scale. Still, a lot of aspects need to be addressed before a commercial aquaculture operation could happen such as environmental impact assessments for culturing and harvesting and grow-out methods.

Biography

Dung V Le is a current PhD candidate at Auckland University of Technology under Professor Andrea C Alfaro's supervision. He has completed his Bachelor degree in Aquaculture Engineer at NhaTrang University, Vietnam and MSc degree in aquaculture nutrition at National Taiwan Ocean University, Taiwan. He has been a researcher at Research Institute for Aquaculture No.1 and Geoduck farmer in Vietnam before devoting his time in New Zealand geoduck.

andrea.alfaro@aut.ac.nz

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