

Effect of transplantation on the growth, survival rate, and fishing cost-effectiveness of juvenile manila clams (*Ruditapes philippinarum*) in the southern part of Lake Hamana, Japan, in 2007

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Abstract From April to June 2007, 6.1 tons (2.8 million pieces) of juvenile manila clams (*Ruditapes philippinarum*) with an average shell length of 20 mm were collected in the southern part of Lake Hamana, Japan, and transplanted to a no-fishing area of the same lake. In this study, we clarified the growth, survival, and cost-effectiveness of the transplanted clams. The juvenile clams, which had an average shell length of 19.7 mm in early June, grew to approximately 30 mm by autumn (October). The survival rate from June 2007 until February 2008, when the no-fishing area was opened for fishing, was 97.7%. Over three days after fishing resumed, an estimated 9.6 tons (1.14 million pieces) of clams were harvested, amounting to 3.49 million yen, resulting in a cost-effectiveness value of 5.2. The final cost-effectiveness of the entire clam fishing season including the subsequent catch was estimated at 12.0.

Key words: manila clam, *Ruditapes philippinarum*, Lake Hamana, juvenile, transplantation, feeding Damage, growth, cost-effectiveness