

AQUA 2012 - Meeting Abstract

JAPANESE EEL PROPAGATION AND HYBRIDISATION OF EEL SPECIES BY USING CRYOPRESERVED SPERM (*Anguilla japonica* *A. anguilla*)

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The objective of this study was to investigate the effect of the cryopreserved sperm from seawater reared Japanese eel and freshwater reared European eel males on fertilisation using Japanese eel eggs.

Full sexual maturation and long term spermiation of farmed Japanese eel in seawater and European eel males in freshwater were induced with weekly hCG injections (1 IU/g bodyweight and 250 IU/male, respectively). Japanese eel females were matured using weekly salmon pituitary extract (20 mg/bodyweight kg) and the ovulations were induced by 17 alpha, 20 beta-dihydroxy-4-pregnen-3-one (2 mg/bodyweight kg). The fertilisation tests were performed in Tokyo University of Agriculture (Japan) using the dry fertilisation method. Our experiments on the cryopreservation of eel sperm show that the modified Tanaka extender in case of European eel and Artificial Seminal Plasma in case of Japanese eel are suitable for freezing eel sperm together with methanol as cryoprotectant (Figure 1.)

Since there is no significant difference between the fertilisation capability of the freshwater and seawater spermatozoa, it is supposed that freshwater rearing of males is not a barrier factor for the artificial propagation of eels.

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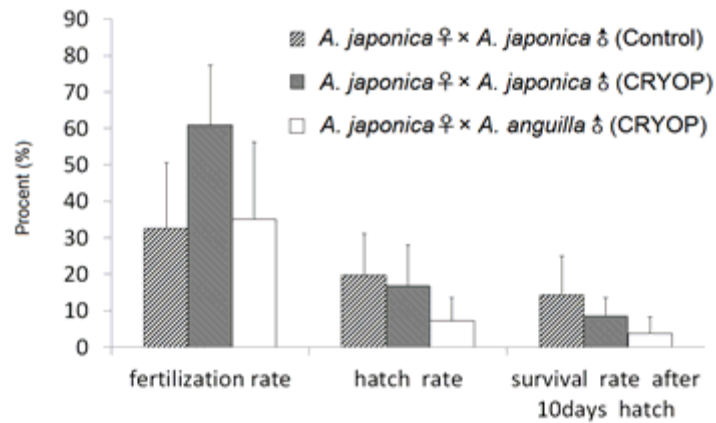


Figure 1. Summarised data about the fertilisation by using cryopreserved sperms (CRYOP-cryopreserved sperm)

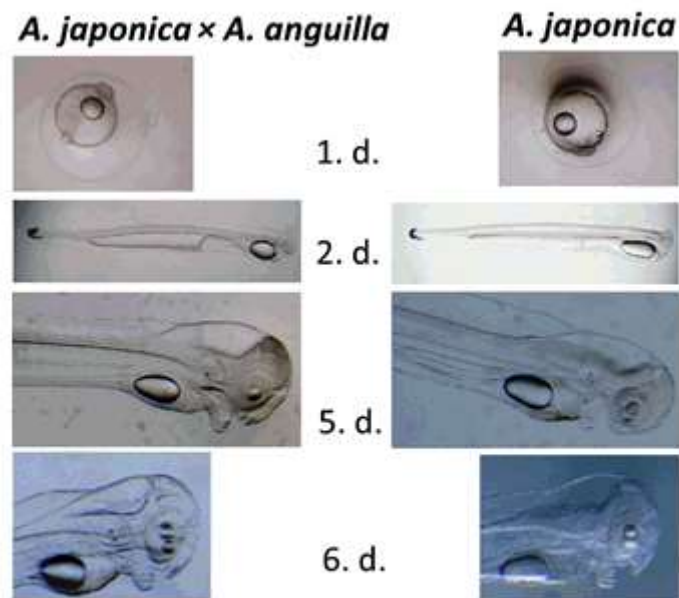


Figure 2. Pictures of embryos and larvae of hybrid and *A. japonica* (d-days).