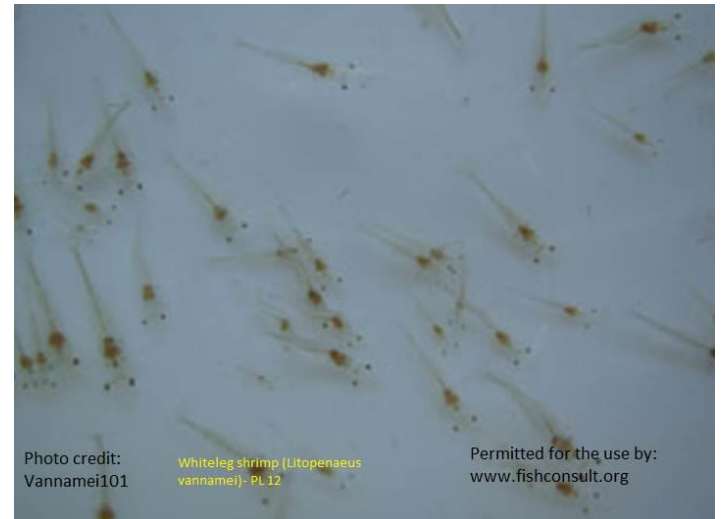


# Stress tests for the postlarvae of whiteleg shrimp (*Litopenaeus vannamei*)

A significant part for the culture of the whiteleg shrimp (*Litopenaeus vannamei*) prefer to receive post larvae 12 (PL 12) and stock it directly in grow-out ponds without further nursing.

The adoption of this scenario targets to minimize the handling stress related to the stocking and harvesting in and from nursery facilities.

This single stock approach makes it necessary to ascertain the high quality of stocked PLs and hence high survival and so higher production by the end of the grow-out season. Various tests are adopted before the stocking the “PLs” in grow-out facilities.



**Photo credit:** David Kawahigashi - Vannamei101

# Commonly used stress tests:

**Formalin test:** this test targets to cull weak post larvae for “White spot syndrome virus (WSSV)” before stocking in grow-out ponds. The test is performed by exposing animals to 150 mg/l, formalin solution for 30 minutes. This technique has been found useful in reducing the number of infected PLs stocked into ponds. Some farms use 100 mg/l formalin instead of 150 mg/l.

**Osmosis stress (Salinity Shock):** The shock is done by exposing the shrimp postlarvae to a sudden decrease from ambient salinity to freshwater (0 g/l) for a period of 15-30 minutes before salinity is returned to the ambient salinity. The concept of the test is to determine the ability of postlarvae to absorb the immediate changes in water salinity.

Stress tests are rapid, simple and act as quality control procedures. Tests are performed at shrimp hatcheries before PLs are transported to the farms.

If the results of the tests are outside of normal parameters, the PLs should not be stocked in grow-out ponds.