ASI Newsletter – Summer 2013/2014

2013 Breeding Season:

ASI has kept busy this summer – with excellent results!

A very busy few months in the hatchery has resulted in the production of 80 families in the YC13 year class, spawned in November and December 2013. This is our greatest ever number of families but a large margin, with a previous record of 55 families in the YC12 year class. Spat were sent to NSW in February to commence spat trials in the Georges River and laboratory trials at the Elizabeth Macarthur Agricultural Institute (EMAI) in Menangle.

In order to support our increased family production, ASI has welcomed Kate Picone to our team. Kate completed a Bachelor of Marine Science at the University of Tasmania, followed by her honours at the Institute for Marine and Antarctic Sciences on the Zooplankton of the East Australian Current.

POMS update

Developing a Laboratory-based Infectivity model

Field-based POMS challenges can be difficult, as they are labour intensive and involve many variables, so a lab based infection model is currently being developed as a product of the laboratory trials at the Elizabeth Macarthur Agricultural Institute. The scientists EMAI are now able to reliably infect oysters with the stored POMS virus, and are investigating the reaction to different doses of the virus. We aim to develop this model to the point where it can be used to evaluate the POMS resistance level of ASI family lines in a laboratory environment, negating the need for field trials.

YC12 POMS trials

A juvenile field challenge of our YC12 year class families was held in November 2013 in NSW. Over the course of this trial mortality rates ranged from 20-100%. While this doesn't mean that we have achieved 80% POMS resistance in any family lines just yet, it was a very successful trial with a good spread of mortality rates. This provides good genetic information which can be used for future breeding efforts.

A New Challenge – Port Stephens mortalities

Due to unexplained mortalities at Port Stephens, ASI has had to re-evaluate our strategy for POMS survival trialling in NSW. Port Stephens has previously been used as a holding site for spat and juvenile oysters before being places in the Georges River for POMS resistance trials. Three main concerns have arisen from this situation:

• There is a risk that the mortalities will continue and we could lose our animals for the Juvenile POMS challenge

• If a pathogen is identified as the cause of the mortalities Port Stephens may be quarantined in which case we couldn't move oysters to the Georges

• The Port Stephens syndrome may be impacting on the health of the oysters which may confound the results of the POMS trials

ASI is currently exploring risk mitigation strategies.