

SPATnz PGP Programme



QUARTERLY REPORT: MARCH - JUNE 2014

The SPATnz PGP Programme will develop methods for hatchery production of juvenile mussels (spat) in commercial quantities. It will also develop improved strains of mussel using conventional selective breeding strengthened by the application of modern genetic techniques.

In the April to June 2014 quarter the major focus of our programme was on the design and development of a facility to enable hatchery research at commercial scale. Given the sensitivity of Greenshell mussel larvae, a lot of attention to detail is required in design and construction. The concrete floors all grade to in-floor drains and the concrete finish needs to balance hygiene, durability and safety in the wet and salty environment. Completion of our concrete floors was delayed by reinforcing steel supply and a very wet Autumn. Following completion of the floors the buildings are going up rapidly. Several months of finishing and fitout work will follow completion of the shell of the buildings.

The “hatchery” building will be a very clean, highly controlled environment designed to rear the most sensitive life stages from egg, through swimming larvae to newly settled spat – a process that takes about a month. Incoming seawater is settled for a few days, then finely filtered and temperature controlled, prior to passing through the mussel rearing tanks. Equal attention is given to producing top quality microalgal mussel food – again a process requiring very clean conditions and a highly controlled environment.

The “nursery” building is relatively uncontrolled by comparison. The juvenile mussels are still less than 1 mm long when we move them from the hatchery to the nursery building, a few weeks after settlement. But even at this size they are much more robust than swimming larvae, and they need to get used to life in the real world before they move to marine farms. The nursery building is not temperature controlled and the incoming seawater arrives unfiltered from ponds that grow microalgal food.

The new hatchery facility is scheduled to begin spat production trials in early 2015.



Hatchery (above) and nursery (below) – floors finished and framing going up, July 2014.

