QUARTERLY PROGRESS SUMMARY: Apr to Jun 2016

SPATNZ

Summary of progress during this quarter

Our baby mussels make the transition from the hatchery to marine farms when only about 1 mm shell length, so still very vulnerable. Once they have grown to around 15 mm they typically run out of growing space, so they are stripped from the rope, thinned out and "intermediate seeded". This thinning process is repeated at about 50 mm shell length, known as "final seeding". We're very happy with the performance seen from the first ten batches of hatchery spat that have passed the intermediate seeding stage. Our first two batches have now also passed final seeding, and shown excellent survival and growth.

New Zealand mussel farming produces around 80-100,000 tonnes of mussels per year but is constrained by a shortage of spat. SPATnz needs to be able to scale up its hatchery techniques if the technology is to serve an industry of this size. With 18 months of research now under our belts it is time to fit-out the free space in the existing hatchery, and start working on methods that can produce more mussel spat. We hope to have the fit-out largely completed by Christmas.

Key highlights and achievements

- The independent mid-term review of the SPATNZ PGP programme was completed in the reporting quarter. The review found that the Programme was on track and had a high chance of delivering predicted benefits.
- We have taken the first steps toward implementing modern genomic tools to increase the accuracy and efficacy of the mussel selective breeding programme.
- Very encouraging survival and growth of seed from 1 mm to 50 mm for the first batches of spat from the new hatchery facility.

Upcoming

- Commence trials with algal production in ponds
- Commence Stage 2 fit-out within the existing hatchery
- Start screening mussel families for additional traits

Investment

Investment period	Industry contribution	MPI Contribution	Total Investment
During this Quarter	$0.36 M	$0.36 M	$0.73 M
Programme To Date	$7.07 M	$7.07 M	$14.15 M

Top: *A mussel spat about 1 mm long crawling on a rope fibre using its extended foot. The gill and gut are visible through the shell. Mussel spat are transferred from the hatchery to the sea at about this size.* ***Bottom:*** *Hatchery mussels nearing final seeding at ~ 50 mm shell length.*