# QUARTERLY PROGRESS SUMMARY: Jan to Mar 2019

SPATNZ

## Summary of progress during this quarter

In the reporting quarter we engraved about 30,000 mussels from the 2018 cohort of selective breeding families, mixed them all up, and distributed them to a number of (growout farms. It is always fascinating to see the similarity within families and the striking differences between them at this stage (see photos). This provides a graphic illustration of the potential of selective breeding, which simply chooses some of the best mussels from a wide range of the best families as parents for the next generation.

One of the trickiest parts of mussel production is achieving consistent survival of tiny mussel spat when transferred to sea. At just 1 mm long, they are still very delicate and highly mobile creatures. They shift from the hatchery, where we have a lot of control over their environment, to spat farms at sea, where we have very little control. Through a combination of different approaches we've made great improvement in spat numbers in recent months, which means much more crop in future from the same hatchery output.

Mussel farmers have been telling us that the crop yields from hatchery mussels have been great. A recent analysis of 66 harvests of hatchery mussels confirmed this, with average crop yield substantially higher than for wild crop.

## Key highlights and achievements

Great improvement in the spat numbers through the first few months on spat farms

Hatchery mussels have shown substantially higher crop yields than expected for wild crop

## Upcoming

- Analysis of data on DNA profiles to guide the choice of parents for selective breeding
- Analysis of factory data from growout trials

## Investment

| Investment period | Industry contribution | MPI Contribution | Total Investment |
|---|---|---|---|
| During this Quarter | $0.33 M | $0.33 M | $0.66 M |
| Programme To Date | $10.48 M | $10.48 M | $20.96 M |

***Photos:*** *Families of mussels born in 2018 and reared side by side, showing strong differences in colour, size and shell markings. Top: a handful of mussels from each of 6 families grown alongside one another. Bottom: two families still attached to rope.*