

Summary of POMS survey and information related to farm management.

Selective breeding is key, but will need to be accompanied by changes in farm management.

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environmental factors associated with POMS

1. Temperature

- Clearly warmer temperature is important, around 20 °C

2. Effects on viral loading from:

- proximity to other leases and feral oysters (biomass of oysters), and water movements considered important by many growers

Need to collect environmental data over several years to detect trends

environmental factors

1. Temperature: chilling oysters

- Several oyster farmers have found that placing 50+ mm oysters in a chiller for 1-3 days at $<5^{\circ}\text{C}$ after harvest can increase oyster survival rate.
- Oysters are kept in the chiller and then graded and larger oysters to market place.
- Smaller oysters approx. (40-50mm) are returned to the water and have been found to have lower mortality rates, compared with similar oysters retained on the farm.
- Farmers would like more information on effects of chilling – e.g. test viral load on consecutive days in the chiller and after back on the lease.
- Does chilling change oyster metabolism and/or viral concentration?



Husbandry factors associated with POMS

1. Handling

- Different approaches between farmers.
- Common view: No handling once POMS occurs or temperatures reach POMS outbreak levels.
- Several farmers found low densities and no handling results in fewer mortalities in POMS areas over summer.
- But can lead to other issues – flatworm infestations with mortalities, poorer growth due to fouling, wide size range etc.
- Also, lot of work to sort out oysters when grading recommences.

Few farmers:

Some low level grading, mortalities higher, but better product with faster growth and more even sizing. Overall better recovery of the product and more \$\$.



husbandry factors

2. Density

- Densities lower in 2016/17 because few spat available.
- Low densities, often in conjunction with no handling, have resulted in lower mortalities in POMS areas over summer.
- Also, faster growth and healthy oysters in good condition.
- Opinions vary on best density in POMS areas, from same as before POMS to very low densities

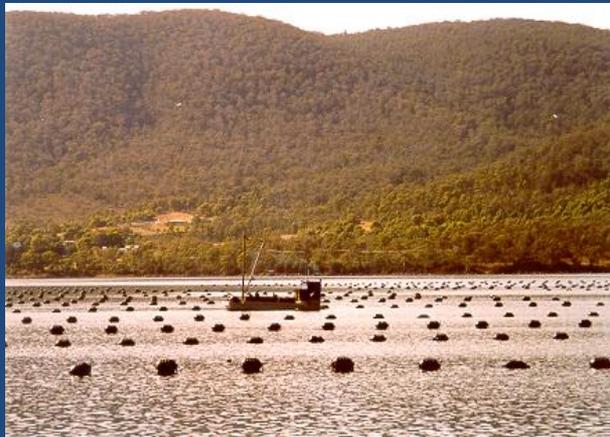
Handling – density

- **Cost-benefit analysis required of handling vs no handling, and at different densities.**



husbandry factors

- **Size (age) does matter**
- Smaller oysters more susceptible to POMS
- Is there a size range when oysters become less susceptible? 40-50 mm?
- How to best grow spat in POMS infected areas? subtidal?



many questions unanswered

STRESS

- Results indicate that anything that stresses an oyster is likely to make it more susceptible to POMS.
- Healthy oysters generally have higher survival rates.

Data only from one season and several years of data will be required to develop a predictive framework.

Growers should keep records of farm management, oyster growth, mortalities, & environmental conditions

Farm management will likely need to change as genetics change.





Learnt a lot this summer but lots more to learn.
Next summer will be an important one!

Many thanks to the hatcheries & growers
who have assisted us with our research