THE UNIVERSITY OF SYDNEY

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Pacific Oyster Mortality Syndrome (POMS): Fact Sheet 2

Husbandry procedures to minimise losses

Pacific Oyster Mortality Syndrome (POMS) is a serious disease of Pacific oysters that is caused by infection with *Ostreid herpesvirus 1* (OsHV-1). Research funded by FRDC at the University of Sydney has revealed several important opportunities for farmers to minimise losses due to POMS.

Some steps can be taken with confidence due to verified research findings[1,2] but may require investment in infrastructure, and other steps require a great deal of work on farm.

Growing height

If you have suitable intertidal cultivation structures on rack and rail or long line, elevate growing height by 300 mm. The objective is to reduce time spent in seawater by 2 hours or more on each tide cycle. This will reduce mortality to half that seen at standard growing height.

Growing height must be raised before oysters become exposed to the virus.

Elevation of growing height is beneficial only for adult oysters; in general >15 months old, >65 mm.

There is no benefit in raising growing height for spat or juvenile oysters, or after mortality commences.

Avoid unnecessary grading and movements of stock

Oysters seem to be affected by the infection and may have increased susceptibility to stress.

Harvest in the face of an outbreak

Observe the pattern of mortality carefully. Outbreaks of POMS occur suddenly and can be devastating. However, based on observations since 2010 in two affected estuaries in NSW we have discovered that there are two to four discrete virus exposure events each summer, with gaps in between. At any given time during an outbreak the mortality rates can vary greatly between nearby baskets or trays, and between racks, between leases/paddocks and between bays in the same estuary. This variation provides an opportunity to proceed with careful harvest. The interval between successive events cannot be predicted but can be weeks or months during the warmer months.

After mortality is observed, reinspect the same area carefully every few days. When no new mortalities are visible, i.e. there are no dead gaping oysters with meat, consider removing the baskets/trays and harvesting.

There is risk of selling dead oysters, but this can be minimised by careful examination of the stock. Individual oysters that weep unusual amounts of water within a few hours after removal from the estuary may be affected by the virus. Manual handling may be required to check every oyster.

Sell young stock first. Older adult oysters have greater resistance than younger oysters. While specific recommendations cannot be given on age/size, it may be sensible to sell the most susceptible younger stock first if there is time to do so.

Some bays or areas within bays may not be affected at all during an outbreak event. While this is good news, it cannot be assumed that these apparently healthy lease areas will remain so. Therefore, if POMs is present in your estuary, sell oysters while you have an opportunity to do so.

[1] Paul-Pont, I., Dhand, N.K., Whittington, R.J., 2013. Influence of husbandry practices on OsHV-1 associated mortality of Pacific oysters *Crassostrea gigas*. Aquaculture 412, 202-214.

[2] Whittington, R., Dhand, N., Evans, O., Paul-Pont, I., 2015. Further observations on the influence of husbandry practices on OsHV-1 µVar mortality in Pacific oysters *Crassostrea gigas*: age, cultivation structures and growing height. Aquaculture 438, 82-97.