INVESTIGATING LOW SALINITY IMMERSION
AS A POTENTIAL MITIGATION STRATEGY FOR MSX IN EASTERN OYSTERS

Some of the literature on MSX suggests that immersion of oysters in waters <10 ppt for 2 to 3 weeks at or above 20°C may eliminate the parasite from infected oysters.

As follow-up, the PEI Aquaculture Division conducted a preliminary laboratory trial in winter 2025 to investigate if low salinity immersion could be used as an MSX mitigation strategy for the PEI oyster industry.

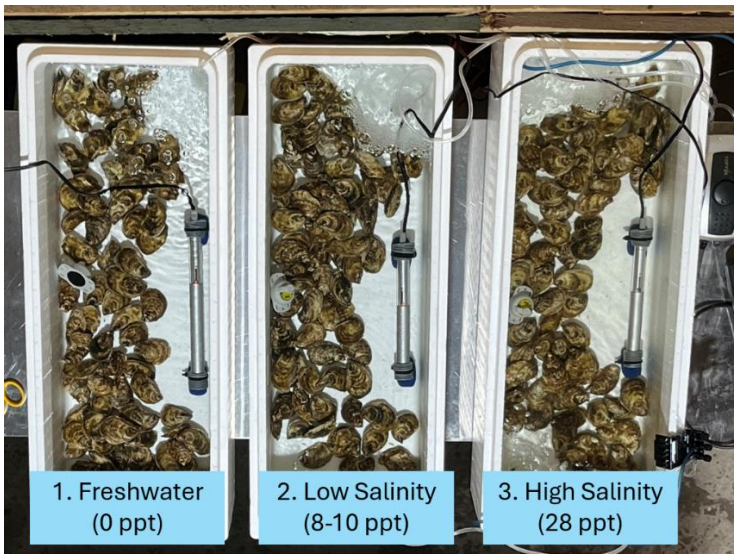

Figure 1. Preliminary laboratory trial conducted in winter 2025.

Histological results of the preliminary trial indicated that *H. nelsoni* plasmodia appeared enlarged (bloated) after 7 days and degraded after 11 days of low salinity treatment (8-10 ppt, 20-21 °C).

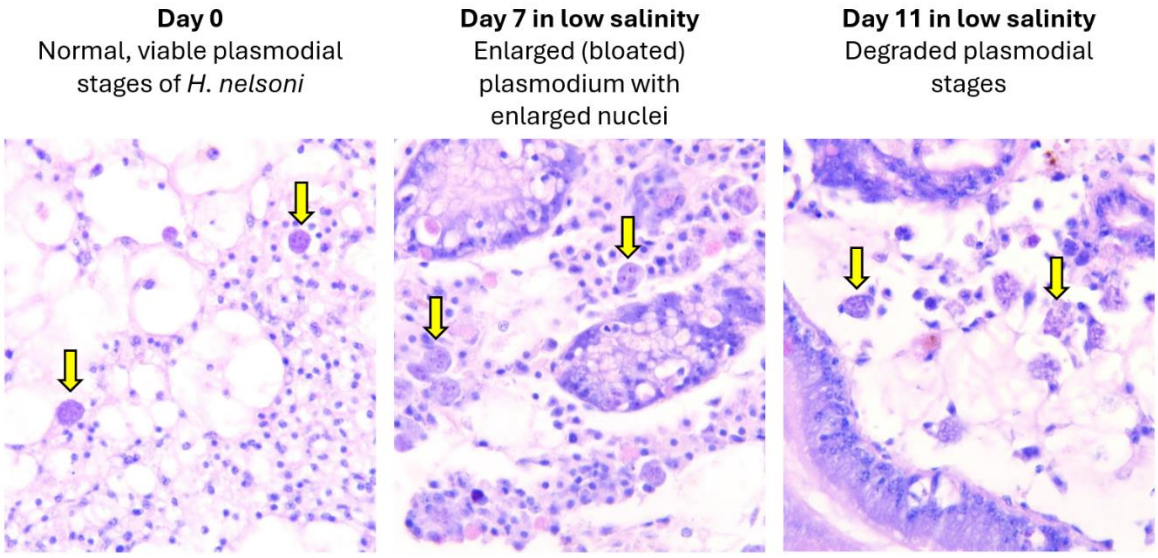

Figure 2. Histological analysis of *H. nelsoni* plasmodia within oyster tissues over 11 days in low salinity water (8-10 ppt).

As follow-up, the province recently initiated a larger scale field trial to further evaluate low salinity immersion as a potential treatment to reduce MSX infection and increase oyster survival.

Oysters (2023 and 2024 seed) were sourced from the Lennox Channel area and will be immersed in low salinity waters (8.5ppt) for a period of 7 days or 11 days. This will be conducted in July and again in September, with some oysters being treated at both times. Upon completion of the treatments, the oysters will be returned to the farm, and final evaluation will be completed in the spring 2026. Samples will also be periodically collected for histology to evaluate the tissues of the oysters for the presence and condition of MSX. The trial is ongoing.

Figure 3. Oysters being treated in low-salinity immersion.

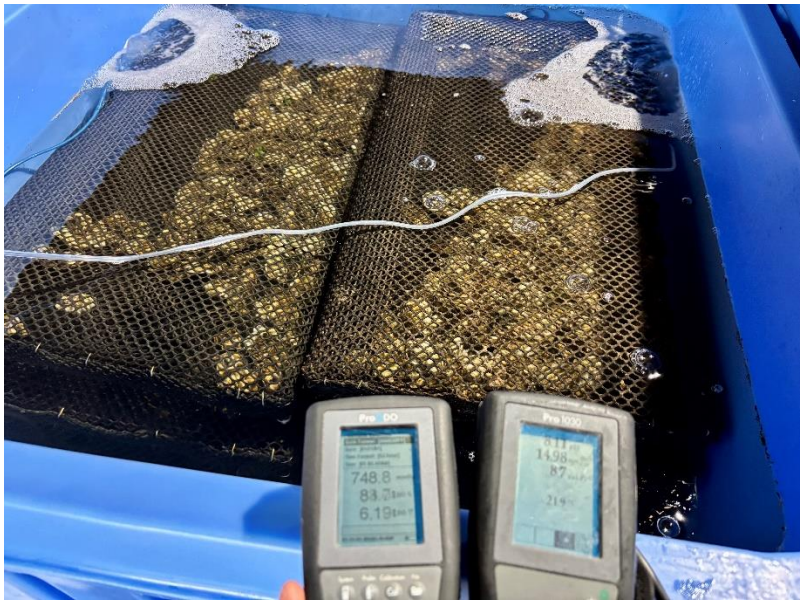

Figure 4. Water quality is routinely checked during the trial.