SEA LICE MANAGEMENT AT B.C. SALMON FARMS

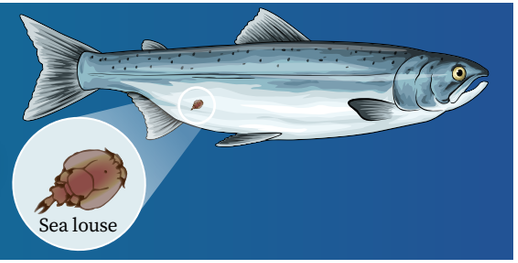
WHAT ARE SEA LICE?

Sea lice are parasites that have lived in British Columbia's coastal waters for thousands of years. Farmed salmon are free of sea lice when they leave freshwater hatcheries but can pick them up in the marine environment.

The species of sea lice that predominantly infects wild and farmed salmon is known as the salmon louse (*Lepeophtheirus salmonis*).

Sea lice generally do not harm adult Pacific salmon, but may harm small juvenile salmon.

Fisheries and Oceans Canada (DFO) requires sea lice to be managed to low levels during the out-migration period, when wild juvenile salmon are at greatest risk.



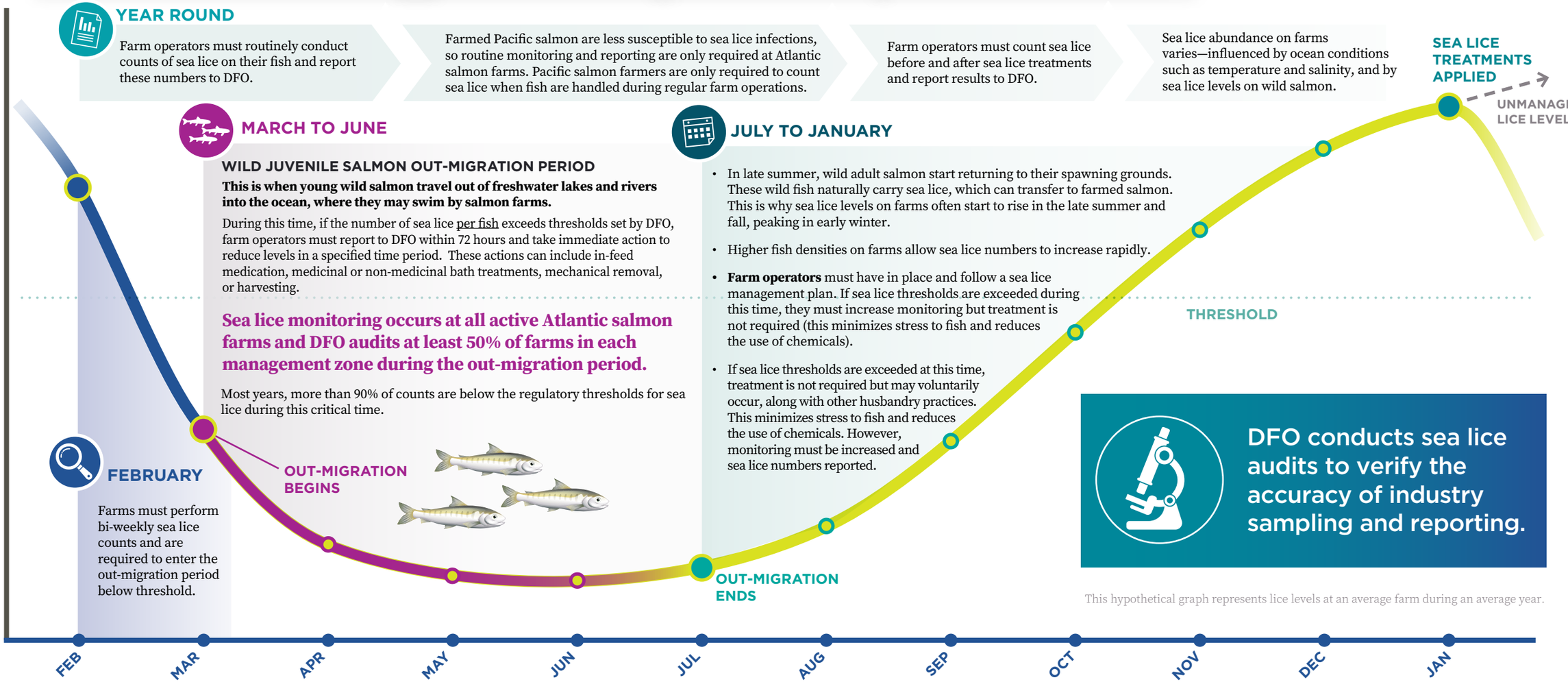
YEAR ROUND

Farm operators must routinely conduct counts of sea lice on their fish and report these numbers to DFO.

Farmed Pacific salmon are less susceptible to sea lice infections, so routine monitoring and reporting are only required at Atlantic salmon farms. Pacific salmon farmers are only required to count sea lice when fish are handled during regular farm operations.

Farm operators must count sea lice before and after sea lice treatments and report results to DFO.

Sea lice abundance on farms varies—influenced by ocean conditions such as temperature and salinity, and by sea lice levels on wild salmon.



MARCH TO JUNE

WILD JUVENILE SALMON OUT-MIGRATION PERIOD

This is when young wild salmon travel out of freshwater lakes and rivers into the ocean, where they may swim by salmon farms.

During this time, if the number of sea lice per fish exceeds thresholds set by DFO, farm operators must report to DFO within 72 hours and take immediate action to reduce levels in a specified time period. These actions can include in-feed medication, medicinal or non-medicinal bath treatments, mechanical removal, or harvesting.

Sea lice monitoring occurs at all active Atlantic salmon farms and DFO audits at least 50% of farms in each management zone during the out-migration period.

Most years, more than 90% of counts are below the regulatory thresholds for sea lice during this critical time.

JULY TO JANUARY

- In late summer, wild adult salmon start returning to their spawning grounds. These wild fish naturally carry sea lice, which can transfer to farmed salmon. This is why sea lice levels on farms often start to rise in the late summer and fall, peaking in early winter.
- Higher fish densities on farms allow sea lice numbers to increase rapidly.
- **Farm operators** must have in place and follow a sea lice management plan. If sea lice thresholds are exceeded during this time, they must increase monitoring but treatment is not required (this minimizes stress to fish and reduces the use of chemicals).
- If sea lice thresholds are exceeded at this time, treatment is not required but may voluntarily occur, along with other husbandry practices. This minimizes stress to fish and reduces the use of chemicals. However, monitoring must be increased and sea lice numbers reported.

FEBRUARY

Farms must perform bi-weekly sea lice counts and are required to enter the out-migration period below threshold.

DFO conducts sea lice audits to verify the accuracy of industry sampling and reporting.

This hypothetical graph represents lice levels at an average farm during an average year.

RESULTS of both industry counts and DFO audits are available at: www.dfo-mpo.gc.ca/aquaculture/protect-protege/parasites-eng.html

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