

## SEA LICE (*LEPEOPHTHEIRUS SALMONIS*)

### Introduction

VESO has broad experience in design and conduct of experimental sea lice trials. Sea lice larvae and motile development stages are cultivated at VESO Vikan. They are typically produced from egg strings that have been obtained from fish farms. Larvae are hatched in specially designed units.

### Challenge models

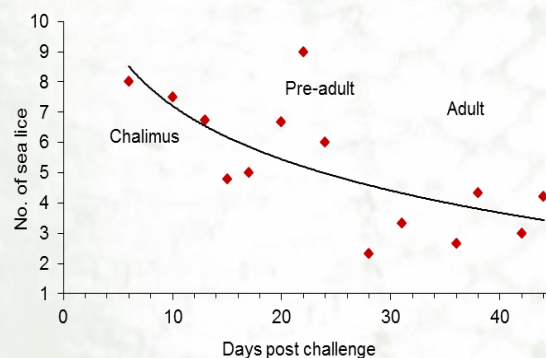
Sea lice challenge trials can be conducted to evaluate the efficacy of new generation anti parasitological drugs, vaccination, feeding or selective breeding for resistance against sea lice attachment. Challenges are typically performed using copepods.

### Effect of *in vivo* treatment

VESO has established several challenge models for testing and screening of chemotherapeutics. Trials are performed with sea lice of all developmental stages (copepodite – adult) attached to seawater adapted post-smolts. We can also evaluate the hatching ability of egg strings after exposure to test substances.

### Bioassay – *in vitro*

Bioassays are designed to measure the sensitivity of a sea lice population to a specific chemotherapeutic. Bioassays may be performed on planktonic larval stages or motile (pre-adult and adult) developmental stages. The sensitivity to test compounds will show a degree of variation depending on e.g. developmental stage and gender. Bioassays must therefore be individually designed according to each test substance.



Tendency of developmental drift in a laboratory sea lice population.