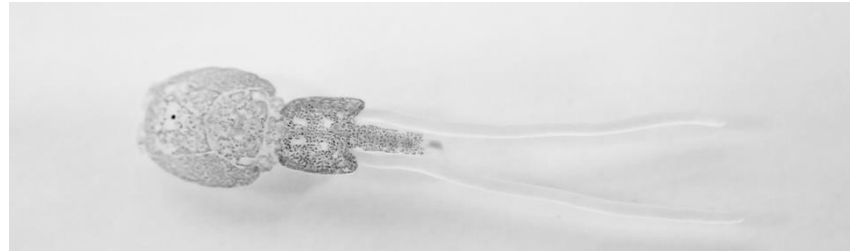


Luseåret 2018: Behandlinger og resistens



Kari Olli Helgesen, Lars Qviller, Attila Tarpai og Tor Einar Horsberg

Veterinærinstituttet

FHF Lusekonferansen, Trondheim, 21.01.19

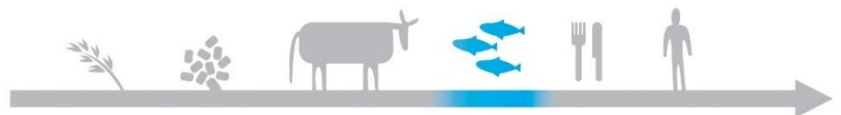


Veterinærinstituttet
Norwegian Veterinary Institute



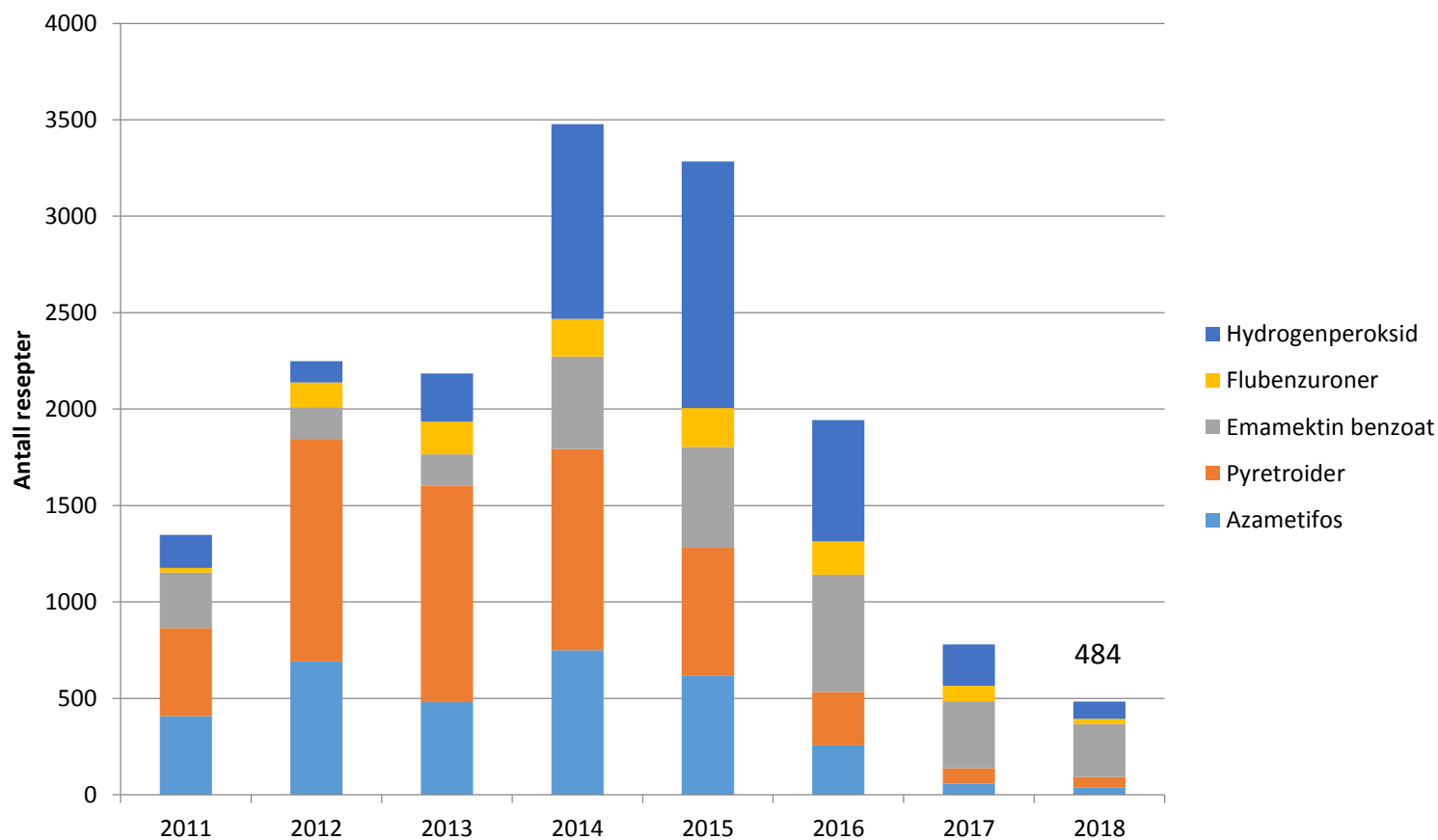
Oversikt

- Hvilke behandlinger ble utført mot lus i 2018?
 - Resultater fra resistensovervåkninga i 2018
 - Resistensutvikling over tid
 - Konklusjon
-
- NB! Foreløpige resultater



Medikamentelle behandlinger

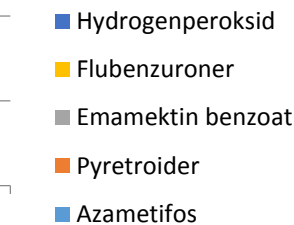
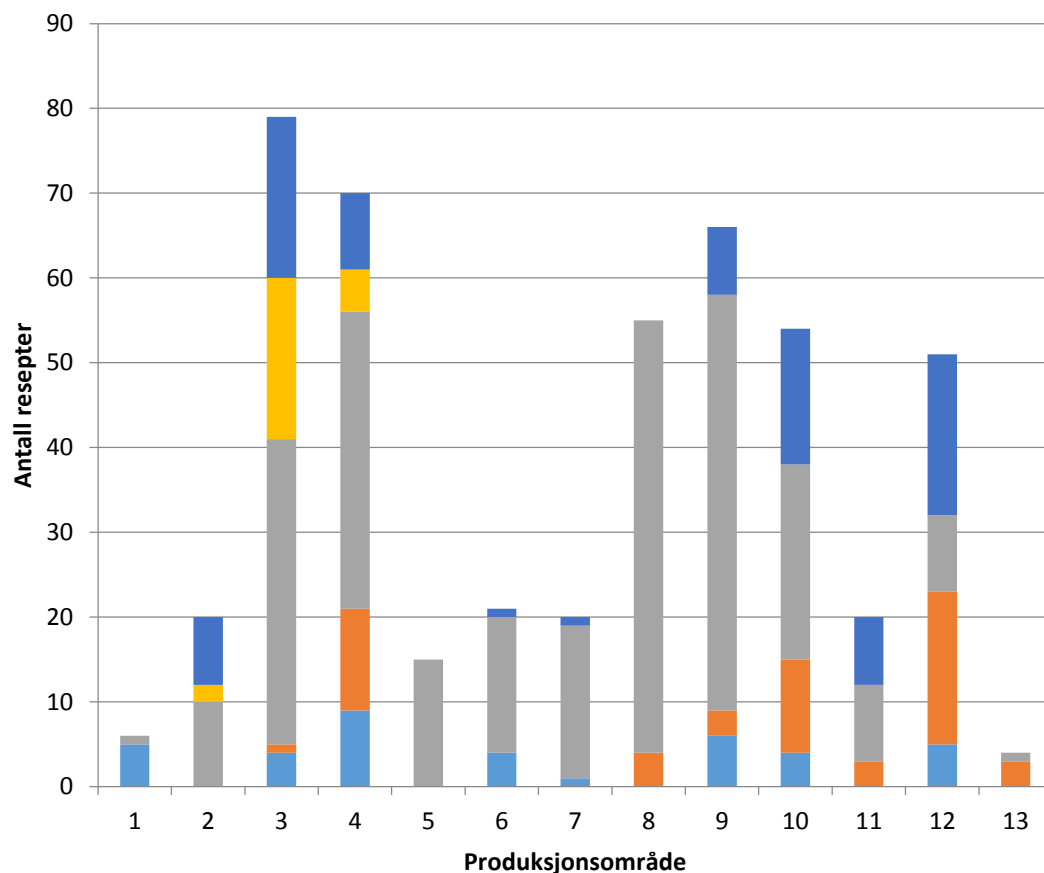
- Antall resepter på legemidler mot lus:



Kilde: Veterinært legemiddelregister (VetReg)

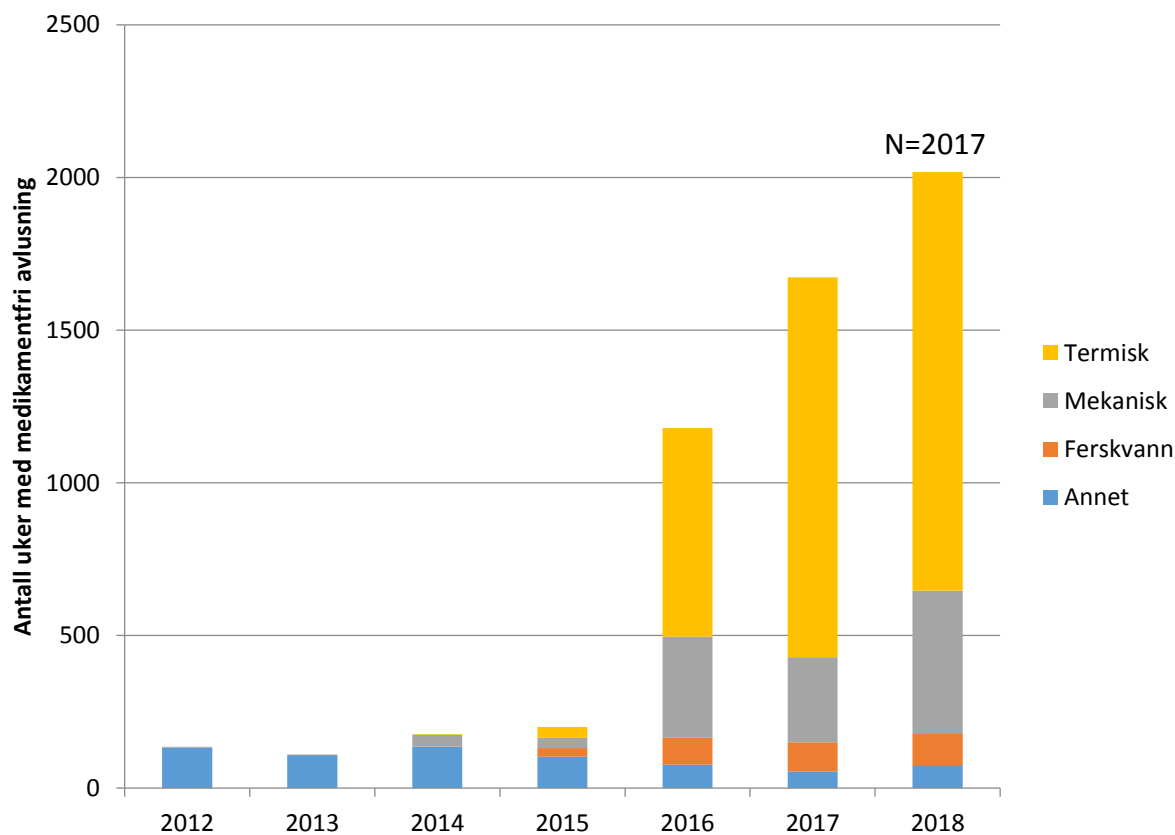
Hvor ble behandlingene utført i 2018?

- Behandlinger per produksjonsområde:



Medikamentfrie behandlinger

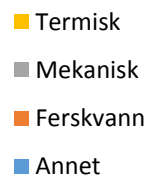
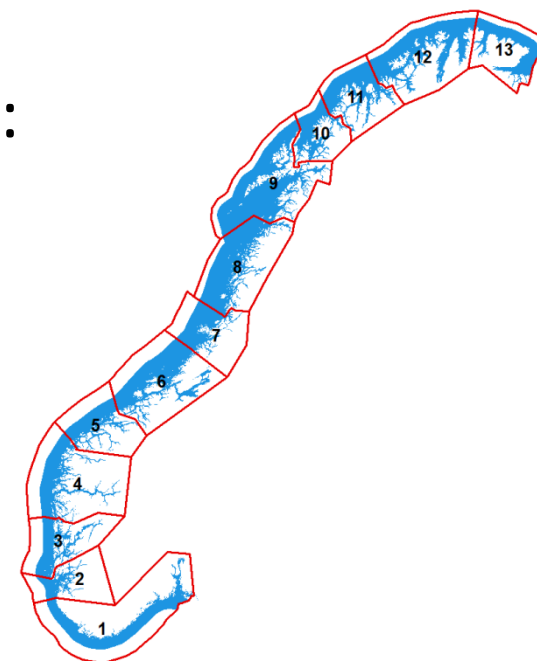
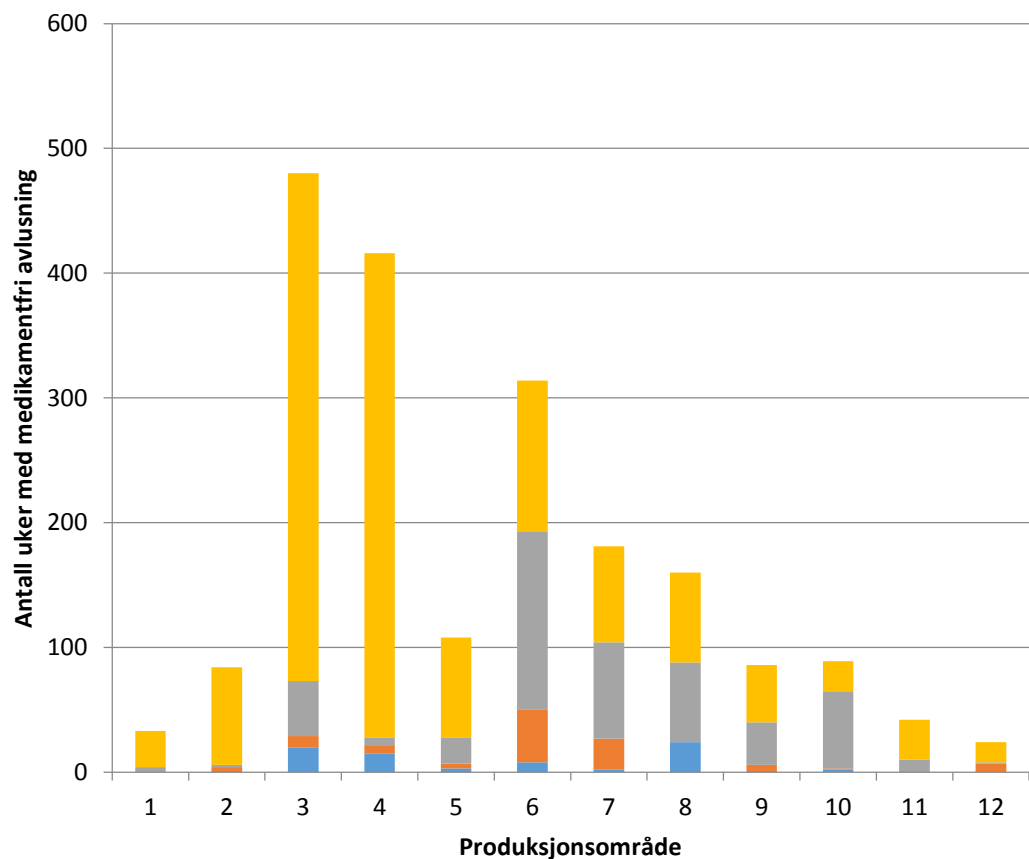
- Antall uker der anlegg har rapportert inn medikamentfrie avlusninger:



Kilde: Ukentlige luserapporter til Mattilsynet

Hvor ble behandlingene utført i 2018?

- Behandlinger per produksjonsområde:



Biologiske assays for resistensovervåkning

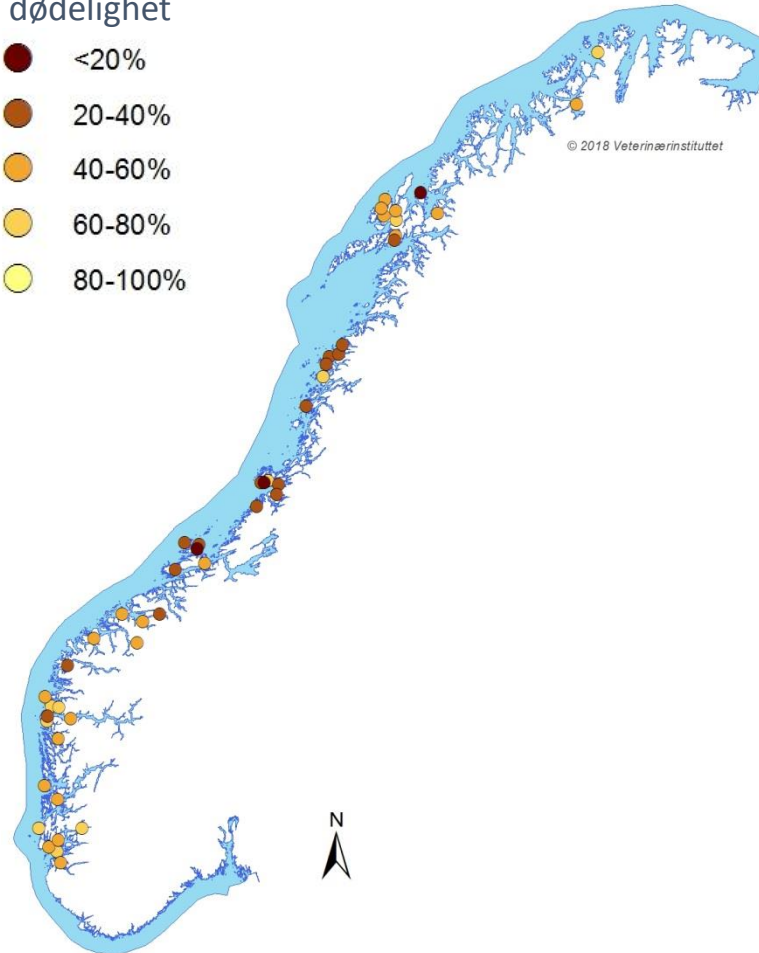
- Overvåkningsprogrammet for resistens hos lakselus utføres av Veterinærinstituttet på vegne av Mattilsynet (siden 2013)
- Aktiv overvåkning
 - Ca. 75 bioassays, 4 stoffer, 2 konsentrasjoner
 - Azametifos (organofosfat), deltametrin (pyretroid), hydrogenperoksid og emamektin benzoat
 - 7 fiskehelsetjenester over hele landet



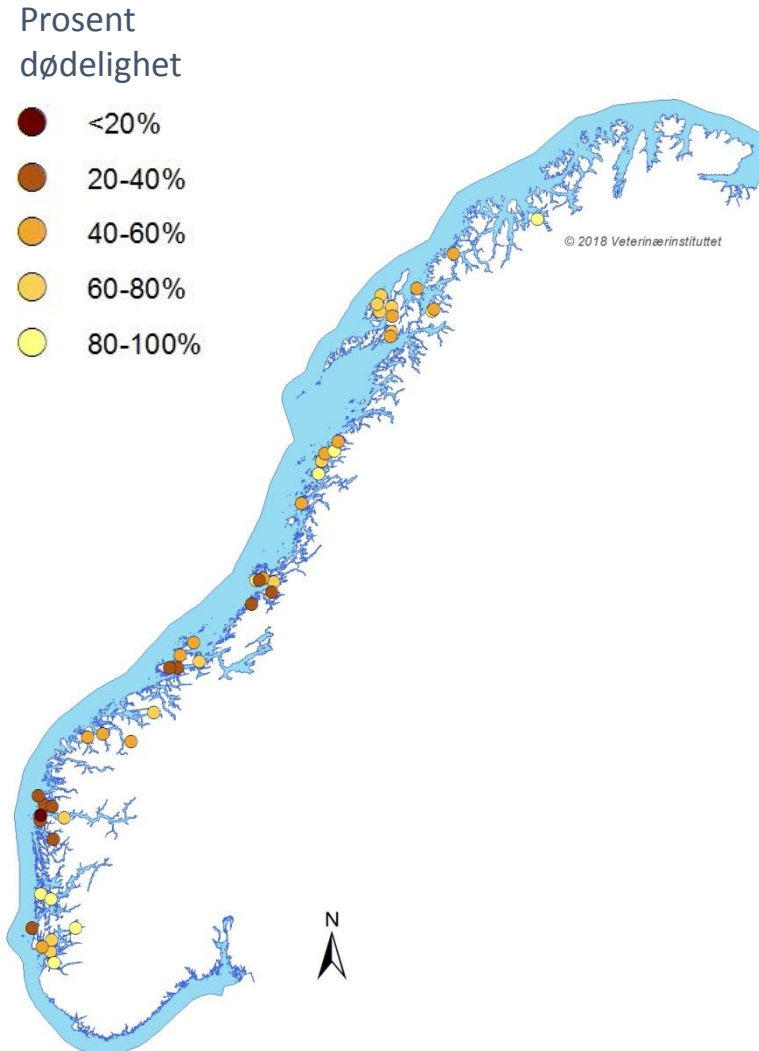
Utbredte resistens mot organofosfater i 2018

Prosent
dødelighet

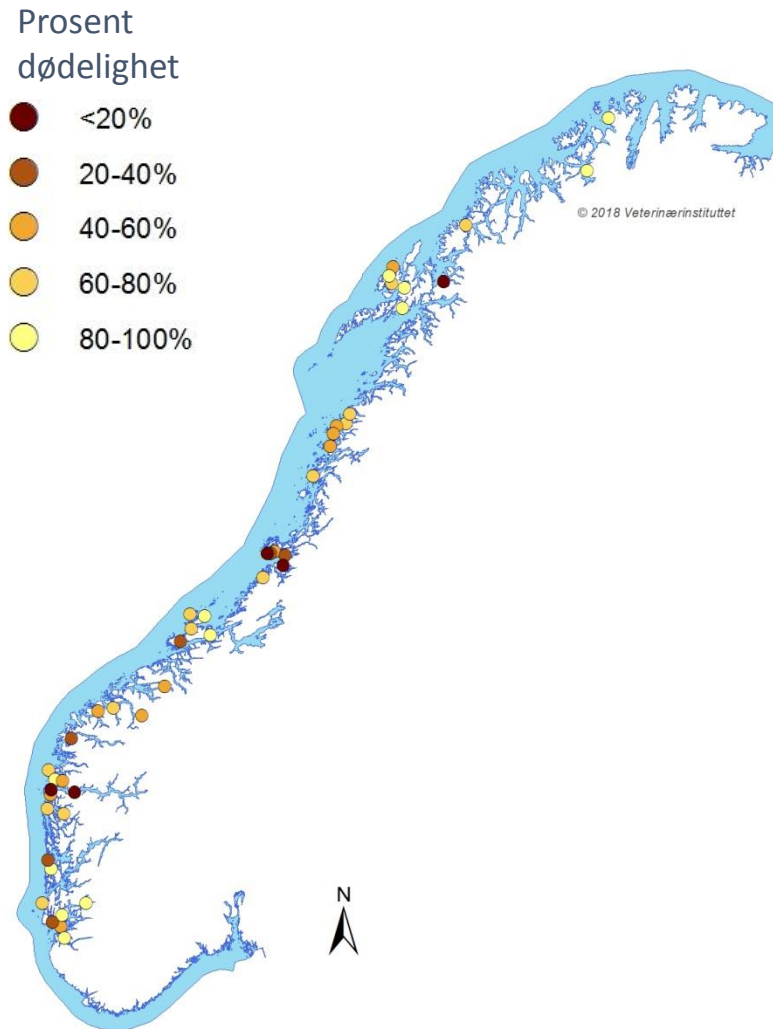
- <20%
- 20-40%
- 40-60%
- 60-80%
- 80-100%



Utbredte resistens mot pyretroider i 2018

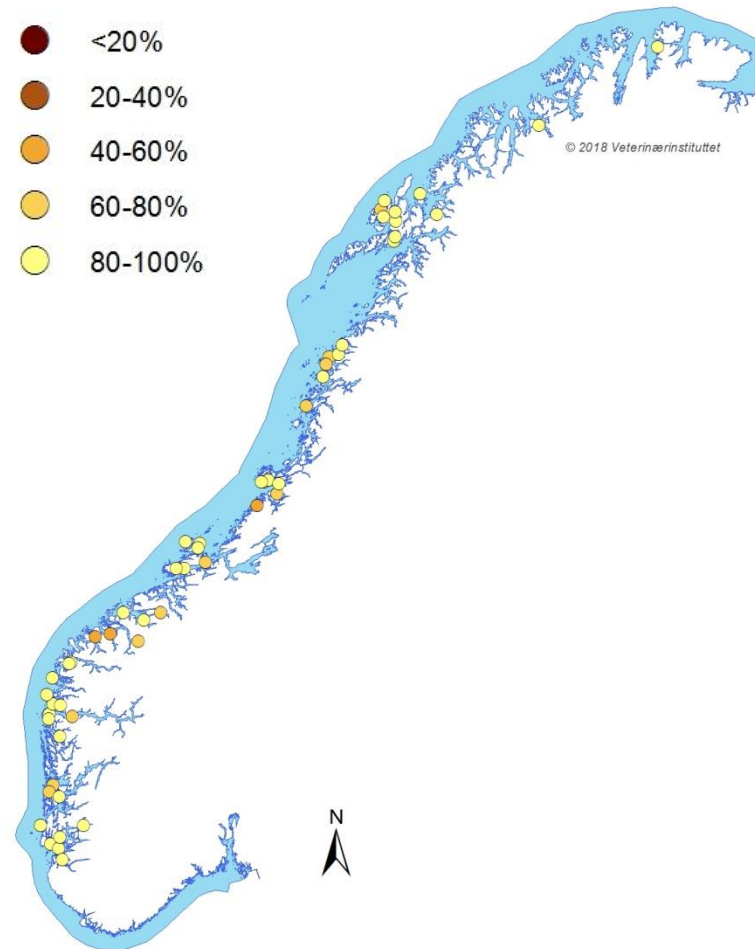


Utbredte resistens mot emamektin benzoat i 2018



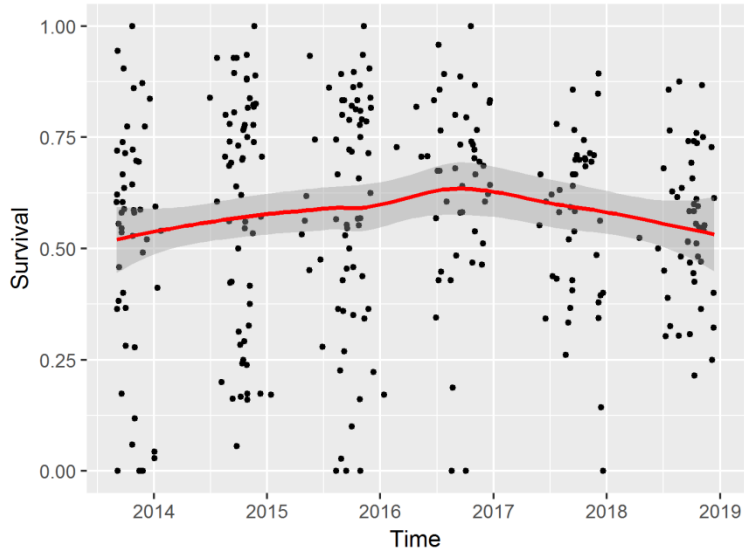
Fortsatt minst resistens mot hydrogenperoksid i 2018

Prosent
dødelighet

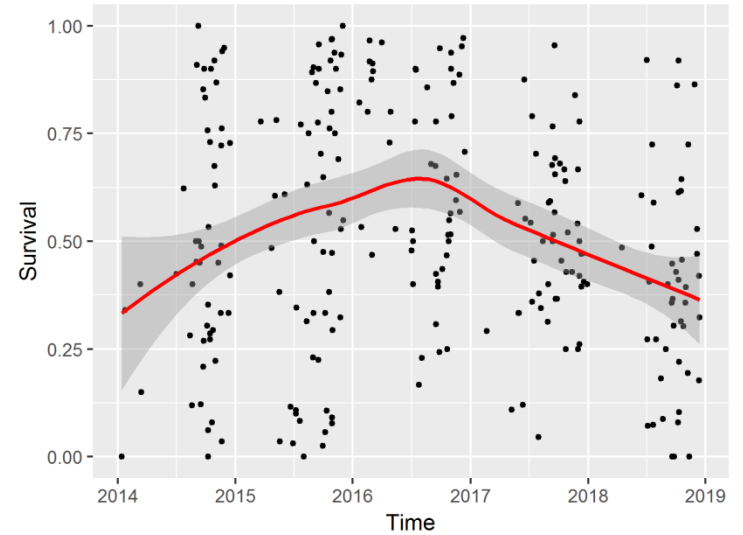


Utvikling av resistens over tid

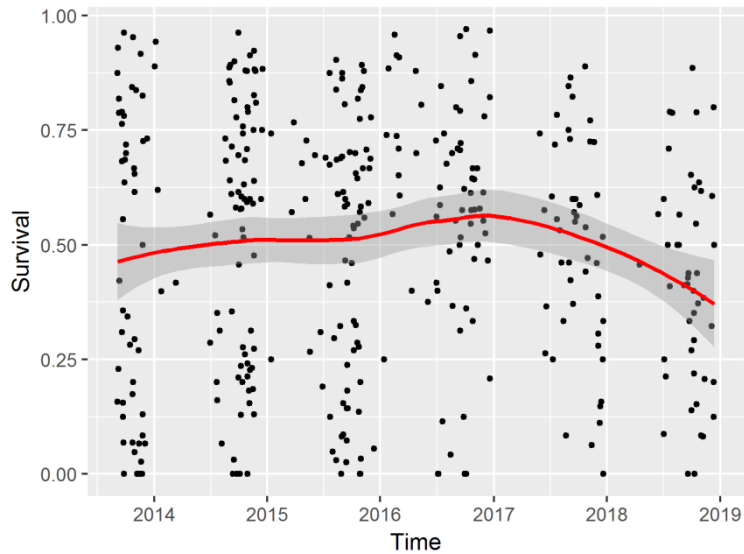
Survival in azamethiphos bioassay



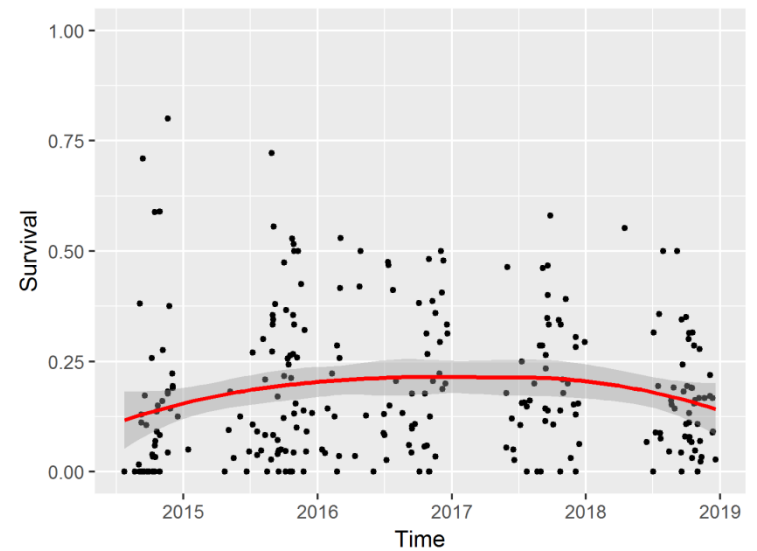
Survival in emamectin benzoate bioassay



Survival in deltamethrin bioassay

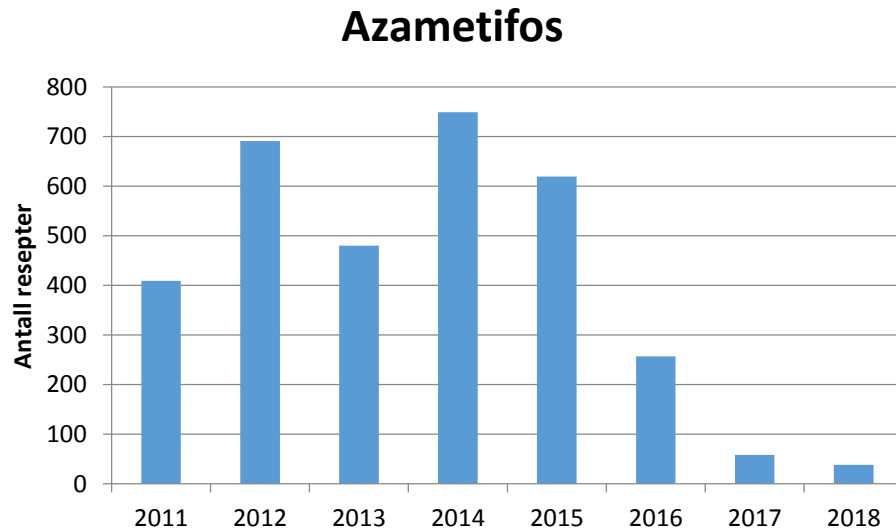


Survival in hydrogen peroxide bioassay

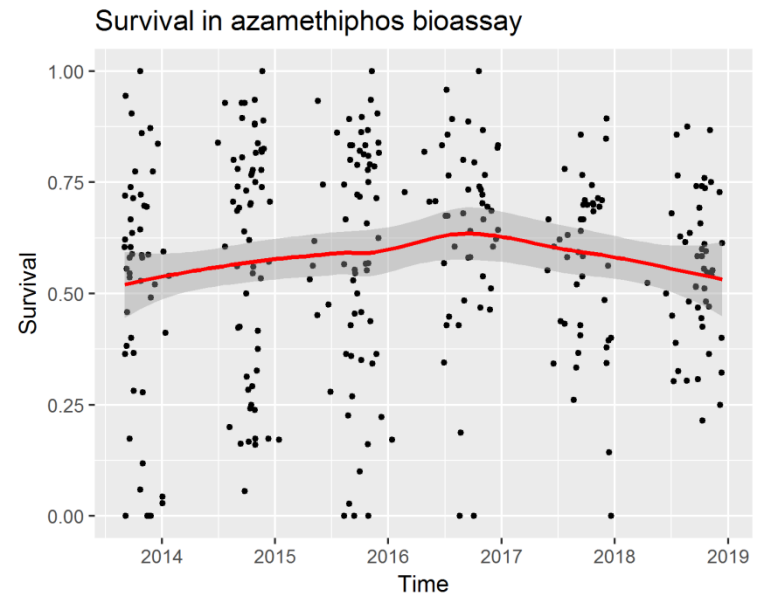


Organofosfater

Forbruk

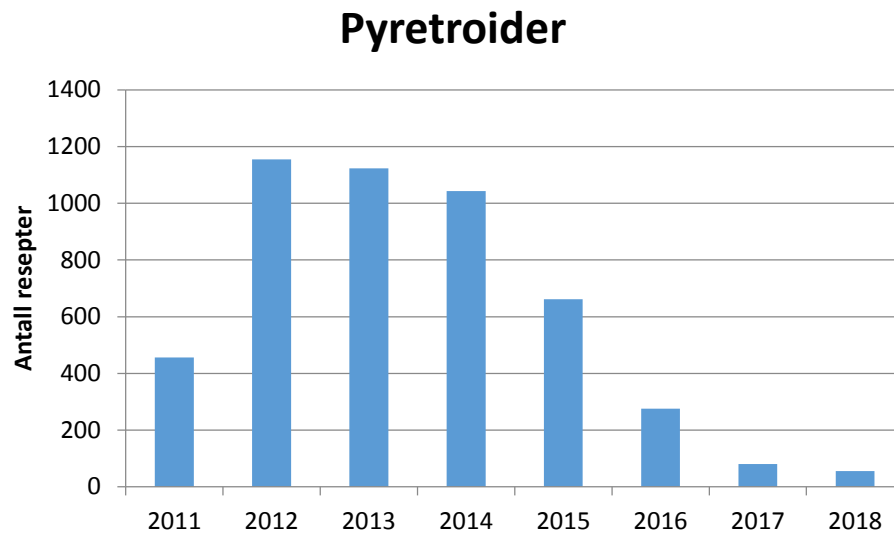


Resistens

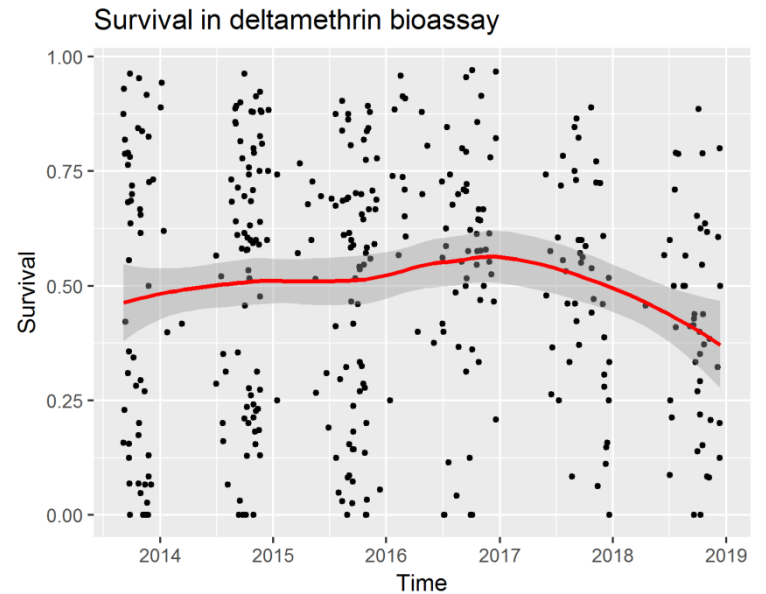


Pyretroider

Forbruk

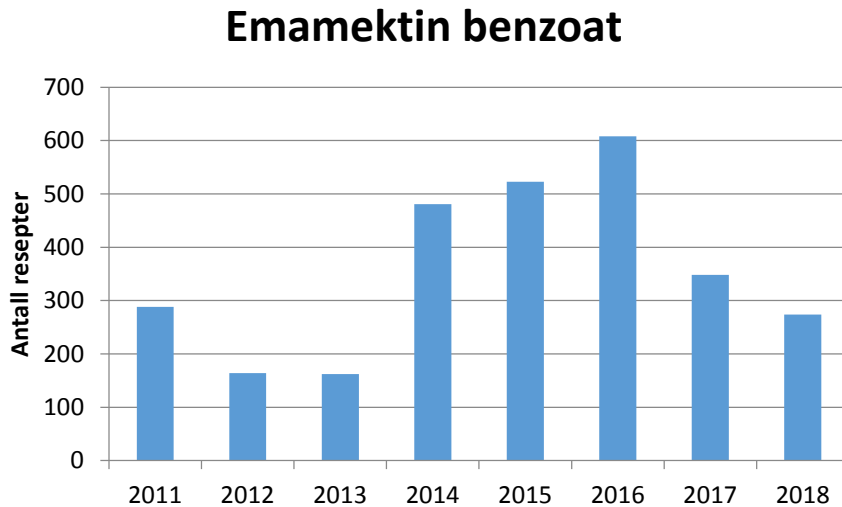


Resistens

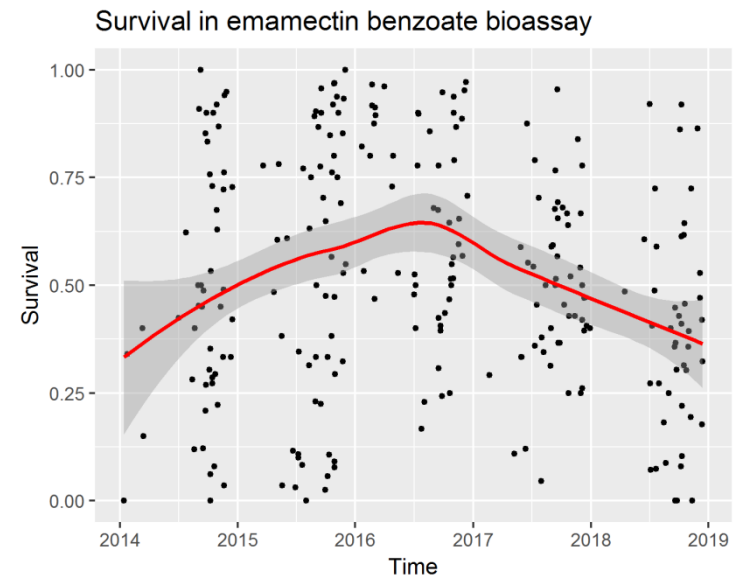


Emamektin benzoat

Forbruk

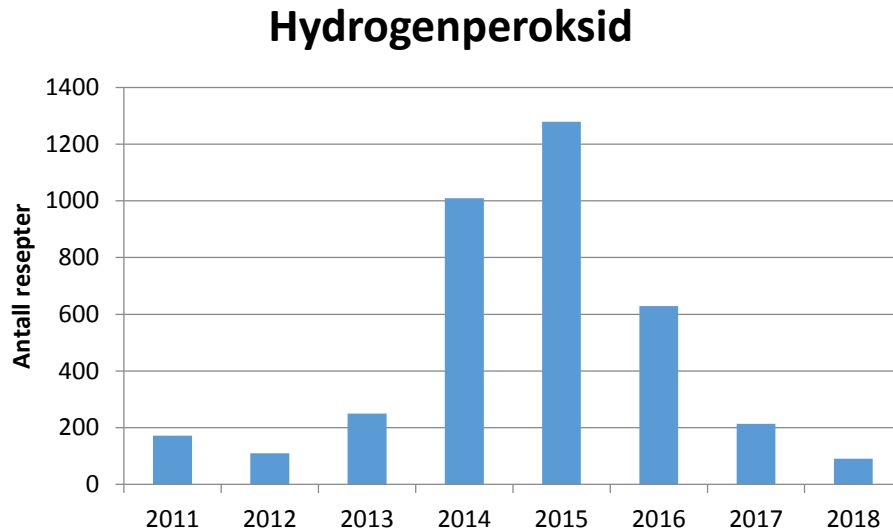


Resistens

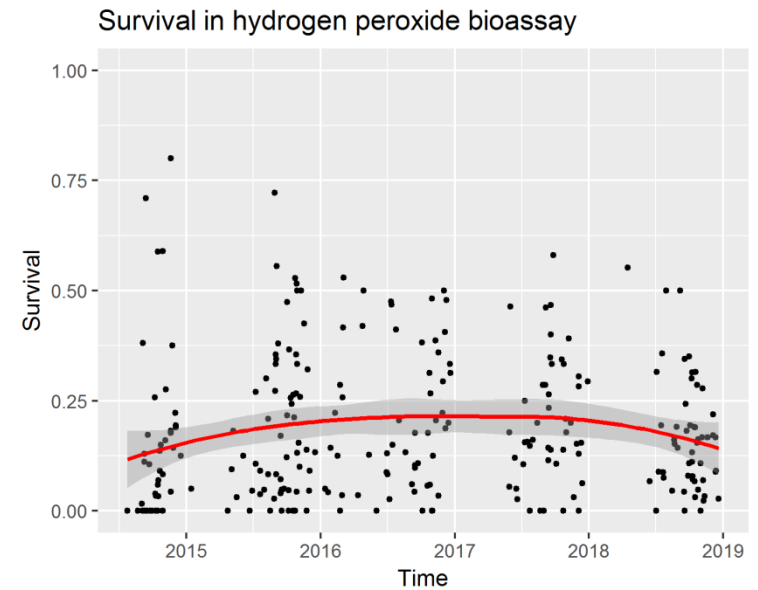


Hydrogen peroksid

Forbruk



Resistens



Konklusjon

- Antall medikamentelle behandlinger gikk ned i fjor
- Antall medikamentfrie behandlinger økte
- Fortsatt resistent lakselus langs hele kysten
- Lusa er minst resistent mot hydrogenperoksid
- En lusesituasjon som ikke kan håndteres med medikamentelle metoder alene
- Etter år med økning i resistens, ser det ut til å være en reduksjon fra og med 2017



Takk til fiskehelsetjenestene for godt samarbeid i 2018:

- AkvaVet Gulen
- Aquakompetanse
- Fishguard Bergen, Måløy og Harstad
- FoMAS
- HaVet AS
- Marin Helse
- Åkerblå

