



Sea Lice Work – I/SPAH

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I/SPAH Focus?

- We have what we have.....
- Will there be anything new soon...?
- We need to maximise the efficacy of the tools we have today –
 - Right choice of treatment – check before use
 - Ensure treatment efficacy per treatment – ‘BP’
 - Co-ordinate treatments – area...
 - Utilise informed/science-based rotation programs
 - incorporating all available treatments/tools

R & D

- R & D pipeline/future products?
 - Yes
 - Timeline - ?
 - 2 directions
 - Pharmaceutical
 - Biological

Areas of Work

- Sensitivity testing & mapping of EB
- Best practice treatment for SLICE
- SLICE monitoring programs – in-field
- Sea lice resistance studies

Sensitivity testing & mapping

- e.g. Chile – a very ‘dark’ picture painted of EB efficacy
- Detailed program of regional sampling of lice populations by bio-assay ongoing
- Things may not be as bleak as they seem.....

Best Practice Treatment – Managing the use of SLICE

- Diet
 - Type – effect of different dietary components on EB uptake – fish/veg/poultry oil
 - Medicated diet manufacturing conditions & methods – temperature, process
- Feeding methods – homogenous treatment is key..
 - Determine optimum feeding regime for SLICE
 - number of meals per day, % of daily ration containing medication
 - Effect of fish size & starvation on medicated feed intake
 - Feeding behaviour affecting treatment recommendation
 - Temperature effect on EB uptake

Monitoring work

- Co-ordinated monitoring of use on farms – the only way to be 100% sure of ‘tolerance’ issues or poor treatment practice....
 - Bio-assay – before treatment
 - Feed samples – mill, feed pipe
 - Flesh samples – post-treatment
 - Clearance results – post treatment

Resistance Studies

- Identification of potential molecular markers for EB resistance in lice –
 - ABC transporters
 - Ligand-gated chloride channels
- Resistant & naïve lice uptake of EB and clearance effect
- Generational studies – changes in EB sensitivity in resistant and naïve lice over time?