Identification of knowledge gaps

FHF Gardermoen

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OB, GR

Are there still some knowledge gaps?

- Is lack of control of PD related to lack of or the industry not utilizing available knowledge to follow «best practice» ?
  - Sub-optimal biosecurity routines
- Some gaps filled
  - Knowledge implemented?
- What are the remaining knowledge gaps?
- Which ones are critical to address?
  - which will contribute to reduce spread of disease/risk of being infected?
  - which will contribute to further improvements in the management of PD ?

reduce spread of disease/risk of being infected?

- Route of infection
- Dose of infection extremely low?
- Vectors (lice…?), sources, reservoirs (other wild fish species…?)
- Is SAV already established in “hidden spots” outside endemic areas in Norway?
- Wellboats
  - Safe distance from PD positive sites?
  - Disinfection of inlet water - UV-dose and effect
  - Effective cleaning and disinfection of boat
- Industry structure
  - size of zones and fire corridores
  - fallow period
- Early detection
  - long incubation time; optimization of screening / testing regimes
  - develop scientifically bases regimes for early detection
  - verify current sampling regimes

Improvements in the management of PD

- Role/effect/impact of concurrent infections, additional organisms…
  - What does it mean for development of PD
  - Why difficult to induce mortality in challenge tests?
- Immunology of SAV
- SAV isolates with different characteristics/virulence ?
- Combo vaccines and novel vaccine technologies
- Dietary impacts and immune dietary mitigation
- Risk factors
  - What are most critical
  - Differentiate on most important eg. Stocking densities or wellboats…
  - Review of current knowledge, risk analysis models before embarking on new projects

Improvements in the management of PD

- Diagnosis
  - ELISA test development, immunohistochemistry
  - Techniques for non-lethal sampling & detection
- Breeding-genetics-QTL…
- Compromised herd immunity responses
- How does density affect transmission, severity & duration of clinical disease
  density as such or poor environment?
- Consequence/impact of different subtypes
- What “turns on” the disease, why do adjacent sites experience totally different mortalities ? Understand role of environment and other possible factors (population dynamics ??) affecting fish physiology and immunology on organ, cellular and sub-cellular levels (incl. gen expression)

- Anything missing?

- How do we go about prioritising?
  - which ones are critical to address/answer?
  - which will contribute most to further improvements in the management (prevention, mitigation…) of PD (++)?