

Workshop on Fish health management and welfare in recirculating aquaculture systems (RAS)

There may be changes in the final programme , following is the situation on November 4 2014

Place: Helsinki/Vantaa, Finland, Hotel Rantasipi Airport

Time: February 3-4 2015, registration at the hotel reception in the morning of February 3

Tuesday February 3 2015

Theme 1 Welcome and industrial background

12:00 Lunch

13:00 Welcome
Perttu Koski, Organizing Committee,
Finnish Food Safety Authority Evira,
(Finland)

13:15 Participants present themselves

13:45 RAS in Nordic countries' aquaculture:
status and recent developments
Jacob Bregnballe, AKVA group (Denmark)

Theme 2 Fish health and welfare in RAS: perceptions and real-life experiences

14:30 Risks to health and welfare in salmonid
hatcheries using RAS, synopsis of the
Norwegian VKM report 2012
Peter Østergard, Aquamed (Faroes)

15:00 Coffee

15:20 Overview of predominant health issues in
large-scale smolt production units

- Northern Norway Per Anton Sæther, Marin Helse AS, Troms
(Norway)
- Norwegian mid-/west coast Asgeir Østvik, Havbrukstjenesten (Norway)
- Faroes Peter Østergard, Aquamed (Faroes)

16:00 Case report: Yersinia ruckeri infection in
freshwater and seawater recirculation
systems for young Atlantic salmon
Berit Seljestokken, Grieg Seafood Finnmark
AS (Norway)

| | | |
|-------|---|---|
| 16:15 | Overview of predominant health issues in rainbow trout hatcheries and table fish production | Thomas Clausen, Dyrlæge Thomas Clausen ApS , (Denmark) |
| 17:00 | Case/field reports: <ul style="list-style-type: none"> Subclinical BKD in RAS production of rainbow trout Algae-problems in salt-water RAS Other reports | Anna Maria Eriksson-Kallio, Evira (Finland) Martin Vestergaard, Aqua-Pri (Denmark) Participants of the workshop |
| 20:00 | Workshop dinner at the restaurant of the hotel | |

Wednesday February 4 2015

Theme 3 Managing dissolved gases and other essential water parameters

| | | |
|-------|---|--|
| 08:30 | Water quality and real time monitoring | Jelena Kolarevic, Nofima (Norway) |
| 09:00 | Understanding and controlling CO2 and pH in RAS | Anders Andreassen, Biomar (Denmark) |
| 09:20 | Risks when using freshwater/seawater mixtures in RAS. FW-SW transfers | Bjørn Olav Rosseland, Norwegian University of Life Sciences (Norway) |
| 09:40 | Case/field reports: <ul style="list-style-type: none"> Empirical experience from the Belsvik smolt farm Water environment in RAS vs flow-through; pros and cons | Erik Daaland?, Lerøy Midnor AS (Norway) Tor Arne Gransjøen, Sundsfjord Smolt (Norway) |
| 10:20 | Coffee | |

Theme 4 Disease control, medicinal treatment and biofilters (what you have to take into consideration)

| | | |
|-------|---|---|
| 10:40 | All in - all out; why and how | Niels Henrik Henriksen, The Danish Aquaculture Organisation (Denmark) |
| 11:00 | Use of formaldehyde and peracetic acid in RAS | Lars Flemming Pedersen, DTU-Aqua (Denmark) |

| | | |
|-------|--|--|
| 11:30 | Can you find antibiotic residues in untreated RAS fish? | Morten Sichlau Bruun, DTU-Aqua (Denmark) |
| 11:50 | Case report/field report : Use of florfenicol in RAS production of coregonids | Perttu Koski, Evira (Finland) |
| 12:10 | Control of fungi in RAS systems and biofilters | Even Thoen, Veterinaer instituttet, Oslo (Norway) |
| 12:30 | Biofilters; subject of infectious agent monitoring/surveillance? | Niels Jørgen Olesen, EU Fish Disease Reference Lab, Copenhagen (Denmark) |
| 13:00 | Lunch | |

Theme 5 *Stocking densities, and monitoring fish welfare*

| | | |
|-------|---|---|
| 14:00 | Proposed interventions, and documentation of improved fish welfare | Paul Midtlyng, Norwegian University of Life Sciences (Norway) |
| 14:20 | Overview of experimental work on stocking densities | Grete Baeverfjord, Nofima (Norway) |
| 14:40 | The role of health and welfare science – what can be learned from the case of battery hens? | Peter Sandøe, University of Copenhagen (Denmark) |
| 15:00 | General discussion | all |
| 15:30 | Closing of the workshop | Anna Maria Eriksson-Kallio, Evira (Finland) |