SEA LICE – INTERGRATED PEST MANAGEMENT - MULTIMEDIA WORKSHOP

Sea lice integrated pest management (IPM) was the topic of a recent workshop at Aquaculture 2013, the World Aquaculture Society conference and trade show in Nashville, Tennessee, February 21-25, 2013. The purpose of the workshop was to gather and summarize the current state of knowledge and practices for sea lice IPM globally and discuss options for moving forward. The workshop included speakers from Canada, Norway, Scotland, Chile and the USA who were invited to speak on specific topics ranging from the current state of research, the application of new, emerging technologies (such as genomics), resistance to veterinary drugs, veterinary/clinical considerations (including animal welfare), integrated pest management programs in use and development, and corporate perspectives. The workshop also featured a panel that discussed improvements to existing approaches, research priorities and resources for farmers within an IPM context. To extend the reach of the workshop, audio recordings were made of the presentations and edited into a multi-media presentation for public access on-line. The multimedia presentation was a pilot for using social media tools to expand the reach of events such as the Aquaculture 2013 to a much wider audience.

The sea lice IPM workshop multimedia presentation can be accessed at the following link:


The Sea Lice IPM Workshop and production of the multimedia presentation was sponsored by the following organizations:

FishVet Group

University of Victoria

MERCK Animal Health

WORLD AQUACULTURE Society
PROGRAM:

Myron Roth, British Columbia Ministry of Agriculture
Introduction to the Workshop

Christina Sommerville, University of Stirling
Sea lice control: a global research perspective

Ben Sutherland, University of Victoria
Genomics in lice and salmon (GiLS) project provides new tools and mechanisms for understanding louse biology

Tor Horsberg, Norwegian School of Veterinary Science
How long can sea lice be controlled with chemical treatments?

Randi Nygaard Grøntvedt, Norwegian Veterinary Institute, Norway
Development of an aquatic integrated pest management – the only way to control sea lice?

Sandra Bravo, Universidad Austral de Chile
Sea lice control from the Chilean perspective/experience

Kathy Brewer-Dalton, New Brunswick Department of Agriculture, Aquaculture and Fisheries
Integrated pest management plan for sea lice in New Brunswick, Canada

Peter Southgate, The Fish Vet Group
Integrated pest management and the control of sea lice: a veterinary perspective

Nell Halse, Cooke Aquaculture Inc.
Sea lice and salmon farming – a business perspective

Panel Discussion: Myron Roth (Moderator), Chris Sommerville, Peter Southgate, Tor Horsberg, Richard Endris, Sandra Bravo, & Nell Halse.
**Presenter Biographies**

**Myron Roth**, Workshop Organizer & Chair/Panel Discussion Moderator  
Myron is currently the Industry Specialist – Aquaculture and Seafood with the British Columbia Ministry of Agriculture. He obtained his Ph.D. in 1993 from the Institute of Aquaculture, University of Stirling, Scotland, studying the control of sea lice. For the past 24 years Myron has worked in the aquaculture and veterinary pharmaceutical and biologics sectors having held senior management positions with Pacific National Group, the Salmon Health Consortium and Novartis-Aqua Health. He has published numerous papers on fish chemotherapy, parasitology and marine biology. Currently, Myron provides extension and policy support for the aquaculture and seafood sectors in British Columbia.

**Christina Sommerville**, Speaker/Panelist  
Chris is the Emeritus Professor of Aquatic Parasitology at the Institute of Aquaculture, University of Stirling, and one of the founding members of the Institute having joined as a fish parasitologist back in 1972. Her research interests lie in host/parasite interactions and, in particular, the pathological effects of parasites. She has worked on the development of diagnostic techniques and the management and control of parasitic diseases of economically important fish species. Chris was involved in the early days of sea lice control in the mid-1980s and participated in much of the research that become the foundation of sea lice IPM.

**Ben Sutherland**, Speaker  
Ben completed a BSc in Biology at Thompson Rivers University in Kamloops BC (2008), writing an honors thesis on detecting extrinsic apoptosis in fish cell culture. He is currently an NSERC funded PhD candidate at the University of Victoria under the supervision of Dr Ben Koop studying sea lice and salmon interactions using transcriptomic tools. He is primarily interested in applying genomics and transcriptomics to ecologically-relevant questions in fish biology, with a focus on immunology.

**Tor Horsberg**, Speaker/Panelist  
Tor is currently a Professor in veterinary pharmacology at the Norwegian School of Veterinary Science in Oslo, Norway. Tor obtained his degree in veterinary medicine in 1983 and his PhD in 1991, for studies on the chemotherapy of sea lice infestations in salmonids. Currently his research focuses on sea lice resistance, mechanisms of resistance, rapid laboratory resistance assays and field-based techniques, and screening new possible sea lice treatments.

**Randi Nygaard Grøntvedt**, Speaker  
Randi is the coordinator of the sea lice group at the Norwegian Veterinary Institute and sea lice R&D coordinator of The Norwegian Seafood Research Fund and sea lice multination platform – where R&D and best practices are discussed in working groups with members from North Atlantic countries facing challenges with *Lepeophtheirus salmonis*. She is also the project leader of research projects related to bath treatment in tarpaulins and well boats, and population dynamics at farming sites.

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Sandra Bravo, Speaker/Panelist
Sandra is an Associate Professor at Universidad Austral de Chile, a position she’s held since 1998. She has a solid industry background having held the positions of Technical Manager in the Chilean salmon company Pesquera Mares Australes and General Manager at SALMOLAB S.A., which provides fish health diagnostic services. Sandra was the co-discoverer of two new species of sea lice important to farmed salmon, Caligus teres in 1981 and Caligus rogercresseyi in 2000.

Kathy Brewer-Dalton, Speaker
Kathy is currently a Fish Health Specialist with the Resource Management and Fish Health Branch of New Brunswick Department of Agriculture, Aquaculture and Fisheries. She has been with the Department since 2005 and focuses on fish health and disease management; policy, program and regulatory development; fish health related research and wild and farmed fish interactions. She has an honours degree in Marine Biology from the University of New Brunswick in Saint John, NB. She has been working in the aquaculture sector for the last 18 years on both the East and West coasts of Canada.

Peter Southgate, Speaker/Panelist
Pete qualified from the Royal Veterinary College in 1979 and obtained his M.Sc. in aquatic veterinary studies from the Institute of Aquaculture, Stirling, where he worked in the Institute's diagnostic service for six years. After a stint as a free-lance aquaculture veterinarian he joined the team of the newly-formed Fish Vet Group in 1995. The Fish Vet Group is an internationally-based company providing a wide range of veterinary and environmental services to the global aquaculture industry.

Nell Halse, Speaker/Panelist
Nell is the Vice President Communications for Cooke Aquaculture Inc. Prior to joining Cooke in 2004, she held positions in Community Relations and Journalism and served as the General Manager of the New Brunswick Salmon Growers Association in Eastern Canada. In her current position, Nell serves as company spokesperson, plays an active role on the company’s management team and represents the company’s interests on regional, national and international industry associations.

Richard Endris, Panelist
Richard is currently the Research Program Manager at Merck Animal Health based in Summit, NJ, USA. Richard’s early research career dates back to the early seventies, having held positions with Mallinckrodt, Merck, US Department of Agriculture, University of Florida and the US Amy, focusing on the control of human and animal vector-borne diseases, sand fly transmission of arboviruses and leishmaniasis; soft tick transmission of African swine fever virus; and hard tick transmission of bacterial and parasitic diseases. After working on the control of ectoparasites of companion and food animals, in 1997 he took on responsibility for global development of pharmaceuticals for aquaculture, including SLICE for control of sea lice on salmonids.