

October 9th – 10th, 2013

Advanced Aquaculture Technologies

Program

Wednesday, October 9th, 2013

Registration 13 : 00–17 : 00

Welcome and opening remarks (Masaaki Fukuda, Director,
Hokkaido National Fisheries Research Institute, FRA) 13 : 30–13 : 45
Aim of the Symposium (Katsuma Hanafusa, Japan Panel Chair)..... 13 : 45–14 : 00

Session I . Overview of Aquaculture in the US and Japan

(Moderators: P. Olin & Y. Machiguchi)

1. The Fisheries Agency's policy directions for aquaculture
Kazumasa Ikuta (Counselor, Resource Enhancement Promotion Department
Japan Fisheries Agency, Ministry of Agriculture Forestry and Fisheries)
..... 14 : 00–14 : 20
2. Aquaculture in the US: The first annual national report on aquaculture
Marie Fujitani (NOAA Office of Aquaculture) 14 : 20–14 : 40
3. The challenge of reconstructing coho salmon aquaculture after the
Great East Japan Earthquake and Tsunami in 2011
Ikutaro Shimizu (National Research Institute of Fisheries Science, FRA)
..... 14 : 40–15 : 00

Discussion 15 : 00–15 : 10

Break 15 : 10–15 : 20

Session II . Fish Diet and Nutrition

(Moderators: K. Webb & K. Murashita)

4. Development of a new type of fish diet, non-fish meal extruded-pellet
Noriko Ishida (National Research Institute of Fisheries Science, FRA)
..... 15 : 20–15 : 40
5. The importance of taurine and n-3 fatty acids in cobia nutrition
Aaron Watson (University of Maryland) 15 : 40–16 : 00
6. Availability of fisheries by-product materials with cadmium removal
treatment as a feed ingredient for fingerling black rockfish *Sebastes schlegeli*
Nobukazu Satoh (Fisheries Research Department Mariculture
Fisheries Research Institute, Hokkaido Research Organization) 16 : 00–16 : 20
7. Development and characterization of several open formula reference
diets for marine fish larvae
Ken Webb (NOAA, Northwest Fisheries Science Center) 16 : 20–16 : 40

8. Effects of diets supplemented with herb essential oils on ectoparasitic protozoan infections on chum salmon (*Oncorhynchus keta*) fry
Shinya Mizuno (Salmon and Freshwater Fisheries Research Institute, Hokkaido Research Organization) 16 : 40–17 : 00

Discussion 17 : 00–17 : 20

Thursday, October 10th, 2013

Registration 9 : 00– 9 : 20

Session II . Fish Diet and Nutrition; continued

(Moderators: A. Watson & N. Satoh)

9. Effect of feed ingredients on digestive enzyme secretion in fish
Koji Murashita (National Research Institute of Aquaculture, FRA) ... 9 : 20– 9 : 40
10. Cholecystokinin and trypsin responses of larval red drum (*Sciaenops ocellatus*) in response to algae, live prey, and inert particles
Michael B. Rust (NOAA) (Presented by Ken Webb) 9 : 40–10 : 00

Discussion 10 : 00–10 : 10

Session III . Management, Social and Economic Issues of the Aquaculture Industry

(Moderators: M. Fujitani & I. Shimizu)

11. An analysis of the causality between the market price of imported fishmeal and market price of marine farmed fish
Yoshifumi Takahashi (Tohoku National Fisheries Research Institute, FRA)
..... 10 : 10–10 : 30
12. Good aquaculture practices to reduce the use of chemotherapeutic agents, minimize bacterial resistance, and control product quality
Stanley Serfling (Food and Drug Administration Office of Food Safety)
(Presented by M. Fujitani) 10 : 30–10 : 50
13. Modeling intraspecific genetic effects for management of aquaculture programs
Jason Volk (ICF International) 10 : 50–11 : 10

Discussion 11 : 10–11 : 20

Group Photo Session 11 : 20–11 : 40

Lunch Break 11 : 40–13 : 00

Session IV . Techniques of Aquaculture Production

(Moderators: J. Volk & K. Okuzawa)

14. Specific monovalent and divalent ion supplementation for culture of marine species
Chris Green (Louisiana State University Agricultural Center) 13 : 00–13 : 20
15. Genetically modified salmon in aquaculture: well regulated and safe
Paul G. Olin (UC San Diego/ Scripps Institution of Oceanography) ... 13 : 20–13 : 40
16. Reproductive dysfunction in cultured sablefish (*Anoplopoma fimbria*)
Jose Guzman (NOAA) 13 : 40–14 : 00

Discussion 14 : 00-14 : 10

Session V. Invertebrate Aquaculture I: Echinoderm

(Moderators: S. Eddy & T. Unuma)

17. Induced spawning in the sea cucumber *Apostichopus japonicus* by neuropeptide, cubifrin
Keisuke Yamano (National Research Institute of Aquaculture, FRA)
..... 14 : 10-14 : 30
18. Mass production of artificial seed of the Japanese common sea cucumber (*Apostichopus japonicus*) in Hokkaido, Japan
Yuichi Sakai (Fisheries Research Department Mariculture Fisheries Research Institute, Hokkaido Research Organization) 14 : 30-14 : 50

Break 14 : 50-15 : 00

(Moderators: D. Morse & K. Yamano)

19. Fluorochrome marking of out-planted green sea urchins, *Strongylocentrotus droebachiensis*, for sea ranching and restocking programs in the Gulf of Maine, USA
Stephen Eddy (University of Maine, Center for Cooperative Aquaculture Research) 15 : 00-15 : 20
20. Improving the food quality of sea urchin gonads by suppressing gametogenesis
Tatsuya Unuma (Hokkaido National Fisheries Research Institute, FRA)
..... 15 : 20-15 : 40
21. Maturation control of the short-spined sea urchin, *Strongylocentrotus intermedius*, by low temperature rearing using deep-sea water, with the aim of extending the market season
Takaaki Kayaba (Kushiro Fisheries Research Institute, Hokkaido Research Organization) 15 : 40-16 : 00

Session VI. Invertebrate Aquaculture II: Mollusc

(Moderators: C. Green & Y. Sakai)

22. Long-term outcomes in the tech transfer of scallop spat collection techniques, from Aomori Prefecture, Japan to Maine, USA
Dana Morse (Maine Sea Grant) 16 : 00-16 : 20
23. Relationship between spat density and environmental factors in cultured Japanese Scallop, *Mizuhopecten yessoensis* in Funka Bay, Japan.
Katsuhisa Baba (Hakodate Fisheries Research Institute, Hokkaido Research Organization) 16 : 20-16 : 40
24. Oyster culture in Hokkaido, Japan
Natsuki Hasegawa (National Research Institute of Aquaculture, FRA)
..... 16 : 40-17 : 00

Discussion 17 : 00-17 : 10

Closing remarks (Paul Olin, U.S.A. Panel Chair) 17 : 10-17 : 20