Program

52nd Scientific Symposium of UJNR Aquaculture Panel

Next Steps for Sustainable and Resilient Aquaculture

Date:

November 5 13:00 - 17:15
November 6 9:00 - 17:30

Venue:

Sinfonia Technology Hibiki Hall Ise, Ise, Mie

Aim of the Symposium

The Japan Fisheries Research and Education Agency will host the 52nd UJNR Aquaculture Panel Scientific Symposium in Ise, Mie, Japan. The UJNR Aquaculture Panel is a cooperative research exchange between the U.S. and Japan, jointly addressing environmental and technical issues that affect the aquaculture industries of both nations.

The UJNR Aquaculture Panel has been interacting with each other for more than 50 years. The global aquaculture industry has continued to develop and expand during this time. Making aquaculture a sustainable industry has become an important issue in recent years. Therefore, in the 12th Three-Year Plan, we have decided to discuss research, education, and collaborations over the next 50 years to make aquaculture sustainable regarding fishery resources and energy and to ensure a permanent supply of animal protein to humanity. This long-term vision inspires hope and a sense of purpose as we embark on this journey. The 52nd UJNR Aquaculture Scientific Symposium is the first year of the current Three-Year Plan, and we will discuss how to make the aquaculture industry sustainable through alternative feeds, breeding, health management, seaweed culture, and ecosystem management.

Tuesday, November 5, 2024

Welcome and aim of the symposium

Natsuko Miki (Japan Panel Chair, Japan Fisheries Research and Education Agency)
····· 13:00 - 13:15

Plenary Lecture

(Moderator: Kazumasa Ikuta)

Building capacity for land-based aquaculture production in the US-national academia-industry-federal partnerships
Yonathan Zohar (University of Maryland, Institute of Marine and Environmental Technology & Department of Marine Biotechnology) ····· 13:15 - 13:45

Alternative Feeds

(Moderators: Caird Rexroad and Akiyuki Ozaki)

Next-generation sustainable aquaculture systems employing insect protein-based feeds
Kazumasa Ikuta (Japan Fisheries Research and Education Agency) ····· 13:45 - 14:00

Multifunctional utilization of insects in aquaculture
Takeshi Miura (Ehime University) ····· 14:00 - 14:30

Validation of the suitability of full fat and defatted black soldier fly meals in diets for rainbow trout
Wendy Sealey (Bozeman Fish Technology Center, Agricultural Research Service, United States Department of Agriculture) ····· 14:30 - 15:00

Protein assimilation from larvae of black soldier fly *Hermetia illucens* in diets for red seabream *Pagrus major*
Tadashi Andoh (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 15:00 - 15:30

Break ····· 15:30 - 15:45

Omics analysis of red seabream (*Pagrus major*) fed a soybean meal-based diet
Hazuki Yoshinaga (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 15:45 - 16:15

Frass from black soldier fly larvae as an aquafeed ingredient: Nutritional value and potential health benefits
Mediha Aksoy (Aquatic Animal Health Research Unit, Agricultural Research Service, United States Department of Agriculture) ····· 16:15 - 16:45

Effect of feeding black soldier fly larvae diets on growth and culture condition of Kuruma prawn
Katsutoshi Ito (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 16:45 - 17:15

Wednesday, November 6, 2024

Genetics/Selective Breeding and Monosex Breeding

(Moderator: Luke Gardner and Shohei Takuno)

Current status of artificial seed production and selective breeding in the Japanese yellowtail *Seriola quinqueradiata*: The progress achieved by FRA
Kenta Adachi (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 09:00 - 09:30

Population structure and selective breeding program for the growth of farmed rainbow trout (*Oncorhynchus mykiss*) in Japan
Tsubasa Uchino (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 09:30 - 10:00

Advancing monosex breeding technology for sablefish (Gindara) aquaculture
Adam Luckenbach (Fisheries Northwest Fisheries Science Center, NOAA) ·· 10:00 - 10:30

Break ····· 10:30 - 10:45

Health Management

(Moderators: Caird Rexroad and Tomofumi Kurobe)

Developing vaccination strategies for prevention of atypical furunculosis in sablefish (*Anoplopoma fimbria*)
Kenneth D Cain (Northwest Fisheries Science Center, NOAA Fisheries) ····· 10:45 - 11:15

Hygiene management is important to prevent red sea bream iridovirus transmission between net pens: Insights from a case study that assessed cross-contamination
Yasuhiko Kawato (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 11:15 - 11:45

Disease control measures in hirame juvenile hatchery: The case of hirame aquareovirus
Tomoki Maeda (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 11:45 - 12:15

Lunch break ····· 12:15 - 13:30

Seaweed Culture and Ecosystem Management

(Moderators: Luke Gardner and Satoshi Watanabe)

Opportunities and challenges for Alaska kelp aquaculture
Jordan Hollarsmith (Alaska Fisheries Science Center, NOAA Fisheries) ····· 13:30 - 14:00

The present status and future scope of seaweed aquaculture in Japan
Hiromori Shimabukuro (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 14:00 - 14:30

Production improvement of Nori aquaculture using biostimulants
Mahiko Abe (National Fisheries University, Japan Fisheries Research and Education Agency) ····· 14:30 - 15:00

Seaweed seedling culture technique using LEDs and feeding behavior of herbivorous fish to suppress fouling seaweed - In the case of "*hiziki*" *Sargassum fusiforme*-
Tsutomu Noda (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 15:00 - 15:30

Break ····· 15:30 - 15:45

Advantages of small-sized macroalgae in seaweed bed restoration in waters with high feeding pressure from herbivorous fishes
Tatsuru Kadota (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 15:45 - 16:15

Pacific oyster condition and mortality in a U.S. Pacific coast estuary: Can relationships with climate, food and reproductive state be utilized to sustain future production?
Brett Dumbauld (Pacific Shellfish Research Unit, Agricultural Research Service, United States Department of Agriculture) ····· 16:15 - 16:45

Image analysis for estimating soft body mass from shell morphology in the Pacific oyster, *Crassostrea gigas*
Junpei Shinji (Fisheries Technology Institute, Japan Fisheries Research and Education Agency) ····· 16:45 - 17:15

Scientific symposium closing

Janet Whaley (US Panel Chair, NOAA Fisheries Office of Aquaculture) ····· 17:15 - 17:30