Monday, February 10

PLENARY
Monday, February 10     8:30 - 10:00     Room 605
Chair: Wendy Sealey

8:30   Welcome and Awards

9:00   Student Spotlight

9:15   Patrick Sorgeloos
       AQUACULTURE: THE BLUE BIOTECHNOLOGY OF THE FUTURE

DRUGS/ThERAPEUTICS
Monday, February 10     11:00 - 12:30     Room 606
Chair: David Straus

11:00   David L. Straus, Bradley D. Farmer, Cynthia K. Ledbetter, Benjamin H. Beck,
        Rick S. Williams, Mike L. Clark, T. Mike Freeze
        TREATING SUNSHINE BASS EGGS WITH COPPER SULFATE CONTROLS FUNGUS
        AND INCREASES SURVIVAL

11:15   David D. Kuhn, Stephen Smith, Dan Taylor, Mary Mainous
        ORGANIC MOLLUSCIDIE OPTION FOR PONDS THAT PRODUCE ORNAMENTAL FISH
11:30  James Bowker, Niccole Wandelear, Molly Bowman, Dan Carty  
ESTABLISHING MARGINS OF SAFETY FOR FINGERLING RAINBOW TROUT,  
YELLOW PERCH, AND CHANNEL CATFISH SEDATED WITH AQUI-S20E

11:45  Anita Kelly, Bradley Farmer, Benjamin Beck, David Straus  
MINNOWS GET COLUMNARIS TOO; COPPER SULFATE WORKS!

12:00  Albert Ekanem, Austin Obiekezie, Dorothy Umoh  
NON CHEMICAL-BASED NATURAL PRODUCTS IN THE TREATMENT AND  
CONTROL OF DISEASE IN FISH

HOW DO WE GROW AQUACULTURE?  
Monday, February 10     11:00 - 12:30     Room 616  
Chairs: Brian Nerrie, Dave Lankamer      NAESC

11:00  Dave Landkamer  
HOW DO WE GROW THE AQUACULTURE INDUSTRY IN THE U.S.?  
ON A NATIONAL LEVEL?  ON AN INDUSTRY LEVEL?  ON A REGIONAL LEVEL?  
ON A STATE LEVEL?

OYSTERS  
Monday, February 10     11:00 - 12:30     Room 618  
Chair: Cecily Steppe

11:00  David Fredriksson, Cecily Steppe, Louise Wallendorf, Robert Mayer  
A CONTAINMENT BARRIER DESIGN PROCEDURE FOR THE PRACTICE OF IN  
SITU SETTING OF Crassostrea virginica LARVAE FOR BOTH AQUACULTURE AND  
RESTORATION APPLICATIONS

11:15  Cecily N. Steppe, David Fredriksson, William Yates, Louise Wallendorf,  
Robert Mayer  
DIRECTED IN SITU SETTING OF Crassostrea virginica LARVAE ON A TARGETED  
SITE IN A TIDAL CREEK; OVERWINTER SURVIVAL AND SET IN THE SECOND YEAR

11:30  Ana Gavrilovic, Jurica Jug-Dujakovic, Zvonimir Kozaric, Ana Ljubicic,  
Alexis Conides, Steven Van Gorder  
VARIATION OF NON-SPECIFIC AMINOPEPTIDASE ACTIVITY IN THE DIGESTIVE  
SYSTEM OF EUROPEAN FLAT OYSTER Ostrea edulis IN RELATION TO FOOD  
AVAILABILITY AND CONDITION INDEX

11:45  Eman Hashem Radwan  
SURVEILLANCE STUDY OF MARINE EDIBLE BIVALVE SPECIES AVAILABLE IN  
EGYPT
STOCK ENHANCEMENT
Monday, February 10  11:00 - 12:30  Room 615
Chair: Eric Saillant

11:00 Eric Saillant, Carly Somerset
ISOLATION BY DISTANCE AND MANAGEMENT OF STOCK ENHANCEMENT
PROGRAMS FOR MARINE SPECIES – CASE STUDY OF THE SPOTTED SEATROUT
_Cynoscion nebulosus_

11:15 Karl Brenkert, Tanya Darden, Tim O’Donnell, Michael R. Denson
IMPLEMENTATION AND EFFECTIVENESS OF STOCK ENHANCEMENT OF SPOTTED
SEATROUT _Cynoscion nebulosus_ IN SOUTH CAROLINA

11:30 Paula Caldentey, Jayne Gardiner, Nathan Brennan
PREY CAPTURE KINEMATICS OF WILD AND HATCHERY JUVENILE COMMON
SNOOK _Centropomus undecimalis_

11:45 Olalekan Oguntade, Tope Oketoki, Esther Ukenye, Tonna Mojekwu, Adeola Usman,
Temitope Adeleke
SURVEY OF THE PRESENT AND FAST DISAPPEARING CULTURABLE FISH SPECIES
ALONG SOME RIVERS IN THE NIGER DELTA, NIGERIA

12:00 Khalid Abbas, Yusara Waris, Fouzia Sultana, Zhou Xiaoyun
MOLECULAR MARKERS REVEAL LOW GENETIC VARIABILITY IN WILD STOCKS
OF _Catla catla_ IN PUNJAB PAKISTAN

12:15 Jiashou Liu, Zhongjie Li, Tanglin Zhang, Xiaowu Li, Wentao Zeng
STOCK ENHANCEMENT OF THE MITTEN CRAB _Eriocheir sinensis_ IN LAKES OF
CHINA BASED ON RESOURCE UTILIZATION AND PROTECTION

SOY IN AQUAFEEDS
Monday, February 10  11:00 - 3:00  Room 609
Chair: Alex Buentello

11:00 Ken Overturf, Frederik Venold, Michael Penn, Ashild Krogdahl
IMPROVED TOLERANCE OF SOYBEAN MEAL IN RAINBOW TROUT SELECTED FOR
GROWTH ON PLANT-BASED DIETS

11:15 Karolina Kwasek, Michal Wojno, Alejandro Buentello, Konrad Dabrowski
CAN REPLACEMENT OF 75% FISHMEAL PROTEIN WITH SOYBEAN MEAL
SUPPORT OPTIMAL GROWTH IN YELLOW PERCH?

11:30 Vikas Kumar, Han-Ping Wang, Ram Laligudi, Rob Cain, Barry McGraw,
Zhigang Shen, Nour Eissa, Hong Yao, Kurt A. Rosentrater
UTILIZATION OF CHEMICALLY MODIFIED SOYBEAN MEAL AND ITS EFFECTS ON
GROWTH AND HEALTH OF YELLOW PERCH _Perca flavescens_

11:45 Brian S. Shepherd, Osvaldo J. Sepulveda-Villet, Frederic T. Barrows,
Wendy M. Sealey, T. Gibson Gaylord, Debra E. Palmquist, Heidi Hill,
Fred P. Binkowski
INFLUENCE OF MINERAL SUPPLEMENTATION ON GROWTH IN YELLOW PERCH
_Perca flavescens_ FED A SOY-BASED DIET
12:00 Waldemar Rossi Jr., Delbert M. Gatlin III  
EFFECT OF PROCESSING TECHNOLOGY ON THE DIGESTIBILITY AND NUTRIENT AVAILABILITY OF SOYBEAN-MEAL IN RED DRUM *Sciaenops ocellatus*

12:15 Dave Jirsa, Artur Rombenso, Michael Page, Mark Drawbridge, Jesse Trushenski  
FERMENTED SOYBEAN MEAL AS AN ALTERNATIVE TO FISH MEAL IN DIETS FOR WHITE SEABASS *Atractoscion nobilis* AND CALIFORNIA YELLOWTAIL *Seriola lalandi*

12:30 LUNCH

1:30 Carlos E. Tudela, Jorge A. Suarez, Alejandro Buentello, Daniel D. Benetti  
EFFECT OF REPLACING DIETARY FISH MEAL WITH SOY-BASED PRODUCTS ON PRODUCTION PERFORMANCE OF NEAR COMMERCIAL SIZE COBIA *Rachycentron canadum*

1:45 Karma Kissinger, Armando García-Ortega, Jesse Trushenski  
FISH MEAL AND FISH OIL REPLACEMENT BY SOYBEAN PROTEIN AND MARINE MICROALGAE IN DIETS FOR JUVENILE GIANT GROUPER *Epinephelus lanceolatus*

2:00 Adel Khamis Soliman, Habashy Mohamed Hasan, Assma Mohamed  
PARTIAL AND COMPLETE REPLACEMENT OF FISH MEAL PROTEIN BY SOYBEAN MEAL PROTEIN AND SOYBEAN PROTEIN CONCENTRATE IN DIETS OF NILE TILAPIA

**LARVAL REARING**

Monday, February 10  11:00 - 4:30  Room 602  
Chairs: Mark Drawbridge, Kevin Stuart, Federico Rotman

11:00 Keri Maull, Kevin Stuart, Federico Rotman, Mark Drawbridge  
A NOVEL APPROACH FOR ROTIFER PRODUCTION AT HUBBS-SEAWORLD RESEARCH INSTITUTE

11:15 Amin Eimanifar, Gilbert Van Stappen, Brad Marden, Michael Wink  
*Artemia* BIODIVERSITY IN ASIA – PHYLOGEOGRAPHY OF THE INTRODUCED AMERICAN SPECIES *Artemia franciscana* (KELLOGG, 1906)

11:30 Eric Cassiano, Matthew Wittenrich, Kevin Barden, Jon-Michael Degidio, Craig Watson  
THE EFFECT OF SALINITY ON THE GROWTH OF THE ROTIFER *Colurella adriatica*: A POTENTIAL NEW LIVE FEED FOR MARINE FISH LARVICULTURE

11:45 Agnes Bardon-Albaret, Sara Kerner, Nathan Herring, Eric Saillant  
EFFECTS OF ENVIRONMENTAL STRESSORS APPLIED POST-FERTILIZATION ON THE VIABILITY OF RED SNAPPER *Lutjanus campechanus* EGGS AND LARVAE

12:00 Ahmed Md. Salem, Hassan Ibrahim, Heba El-Sayed, Abd El-Aziz Nour, Tarek Srour, Samira Assem  
MARINE PROBIOTIC, SYNBIOTIC AND GREENWATER ENRICHED *Artemia* AND ROTIFERS IMPROVING THE GROWTH AND BACTERIOLOGY OF EUROPEAN SEA BASS LARVA EARLY WEANING IN ALEXANDRIA, EGYPT

12:30 LUNCH
1:30 Jennifer Cobcroft, Stephen Battaglene
SWIMBLADDER HYPERINFLATION IN STRIPED TRUMPETER Latris lineata LARVAE IS IMPACTED BY TANK WALL COLOUR

1:45 Lisa C. Armbruster, Kenneth A. Webb, Ronald B. Johnson
USING INDUCTIVELY COUPLED PLASMA OPTICAL EMISSION SPECTROSCOPY TO MEASURE THE NUMBER OF ROTIFERS CONSUMED BY FISH LARVAE

2:00 Christopher Manley, Chet Rakocinski, Phillip Lee, Reginald Blaylock
THE RELATIONSHIP BETWEEN FEEDING FREQUENCY AND AGGRESSIVE BEHAVIORS IN LARVAL HATCHERY-REARED SPOTTED SEATROUT Cynoscion nebulosus

2:15 Christopher Manley, Chet Rakocinski, Phillip Lee, Reginald Blaylock
MANIPULATING FEEDING FREQUENCY AND STOCKING DENSITY TO REDUCE AGGRESSION AND CANNIBALISM IN LARGE-SCALE PRODUCTION OF HATCHERY-REARED SPOTTED SEATROUT Cynoscion nebulosus

2:30 Eric Cassiano, Matthew Wittenrich, Kevin Barden, Jon-Michael Degidio, Craig Watson
THE EFFECT OF LIGHT INTENSITY ON FEEDING RATE AND PREY SELECTION IN YELLOW TANG LARVAE Zebrasoma flavescens: COMPARING THE ROTIFER Colurella adriatica TO THE CALANOID COPEPOD Parvocalanus crassirostris

2:45 John Grayson, Karolina Kwasek, Michal Wojno, Nevine Shabana, Konrad Dabrowski
IMPROVING YELLOW PERCH LARVAE CULTURE BY UTILIZING LIVE FOOD ENRICHMENT WITH PUFA

3:00 Zack Daugherty, Robert Michael, Gavin Partridge, Lindsey Woolley, John Stieglitz, Daniel Benetti
EFFECTS OF ALGAE PASTE SUBSTITUTE ON THE LARVAL REARING PERFORMANCE AND MICROBIAL COMMUNITIES IN THE CULTURE OF YELLOWTAIL KINGFISH Seriola lalandi AND COBIA Rachycentron canadum

3:15 Kenneth Webb, Lisa Armbruster, Michael Rust
THE MONTLAKE OPEN FORMULATION REFERENCE DIET AS A WEANING DIET IN LARVAL RED DRUM Sciaenops ocellatus

3:30 Kevin Stuart, Frederic Barrows, Michael Rust, Ronald Johnson, Mark Drawbridge
TESTING OPEN FORMULA MICRODIETS ON TWO MARINE FINFISH SPECIES

3:45 Maria Celia Portella, Thiago M. de Freitas, Hellen Buzollo, Tais da S. Lopes
INFLUENCE OF WEANING ON THE INCIDENCE OF SKELETAL ANOMALIES IN PACU Piaractus mesopotamicus

4:00 José Reyes-Tomassini, Barry Berejikian, Jonathan Lee, Matthew Cook, Tom Wade, Rick Goetz
THE EFFECT OF LIVE PREY EXTRACTS ON THE FEEDING RESPONSE AND BEHAVIOR OF SABLEFISH Anoplopoma fimbria
ZEBAFISH HUSBANDRY WORKSHOP
Monday, February 10     11:00 - 4:30     Room 607
Chair: Bobbi Bauer

11:00  ZHA ANNUAL MEETING

12:00  LUNCH

1:30  Mark Francis
      INTRODUCTION AND 10-YEAR REVIEW

      Carrie Barton
      ZHA UPDATE

      April Freeman
      ZIRC UPDATE

ZHA PRESENTATION
1:55  Brad Goodwin  
      WELCOME AND OVERVIEW

2:00  George Sanders  
      ZEBRAFISH HUSBANDRY  
      Housing, Nutrition, Care, Water Quality, Record Keeping, Breeding

2:45  BREAK

3:00  Christine Lieggi  
      VETERINARY CARE OF ZEBRAFISH  
      Prevention & treatment of disease, Biosecurity, Import/export procedures, Quarantine

      Brad Goodwin
      SEDATION, ANESTHESIA AND EUTHANASIA

3:35  Joseph Mat Schech  
      ZEBRAFISH MODELS AT THE NIH

WORKSHOP
4:15  Chereen Collymore  
      EVALUATION OF ZEBRAFISH Danio rerio NET CLEANING AND DISINFECTION PROTOCOLS

4:30  Break and walk to:

5:00  CHILDREN’S SEATTLE TOUR
STUDENT CAREER PLANNING SEMINAR
Monday, February 10     1:30 - 4:30     Room 604
Chair: Daniel Aboaygoe

1:30  Douglas G. Drennan
      CAREER PATHS IN AQUACULTURE – A MANUFACTURERS PERSPECTIVE I.E. RESEARCH AND PRODUCT DEVELOPMENT

1:45  Amy Riedel-Stone
      EVOLUTION OF A FISH FARMER TO A SALES MANAGER, CAREER CHOICES EXPLORED

2:00  Jackie Zimmerman
      OH THE PLACES YOU GO…IN AQUACULTURE

2:15  Caleb Price, Kat Goetting, Hillary Egna
      “YOU ALREADY HAVE WHAT IT TAKES TO GET A GOOD JOB…”

2:30  Jeffrey Silverstein
      SWIMMING WITH THE FISHES: FEDERAL CAREER PATHS FOR AQUACULTURE STUDENTS

2:45  Myron Kebus
      CAREERS IN VETERINARY MEDICINE IN AQUACULTURE

3:00  Laura Hoberecht
      NOAA’S ROLE IN AQUACULTURE; OVERVIEW AND OPPORTUNITIES

3:15  Patrick Sorgeloos
      JOINT CAPACITY BUILDING AT MSC AND PHD LEVEL BETWEEN UNIVERSITIES IN NORTH AND SOUTH, EAST AND WEST

SEAFOOD PROCESSING AND TRANSPORT
Monday, February 10     1:30 - 3:00     Room 613
Chair: Pete Nickalson

1:30  John Colt, Gary Fornshell
      WATER QUALITY IN TILAPIA TRANSPORT: FROM THE FARM TO THE RETAIL STORE

1:45  David D. Kuhn, Moonyoung Choi, Shawn Coyle, Terrill Hanson, Laura Lawson, James Tidwell
      DEVELOPING AND VALIDATING PROTOCOLS FOR WATERLESS SHIPPING OF LIVE SHRIMP

2:00  Jesse Trushenski, John Bowzer
      DEVELOPING RESTED HARVEST PROTOCOLS FOR RAINBOW TROUT

2:15  Pete Nickalson, Ronald Johnson
      A HEATED BALL MILL PROCESS TO MAKE SUSTAINABLE TRIM BASED FEED

2:30  Theodora Hyuha, Hillary Egna, Joseph Molnar, James Bukenya, Willy Cornelius Kwiri
      GENDER PERSPECTIVES IN PROCESSING AND HANDLING OF AQUACULTURE PRODUCTS IN UGANDA
AQUAPONIC FOOD PRODUCTION
Monday, February 10     11:00 - 3:30     Room 608
Chair: R. Charlie Shultz

11:00 James Rakocy, Wilson Lennard
CURRENT ISSUES IN AQUAPONICS

11:15 Richard C. Shultz, Nick A. Savidov
EVOLUTION OF AQUAPONICS IN ALBERTA, CANADA

11:30 George Brooks, Jr.
WHAT GOOD IS AQUAPONICS?

11:45 Patricia L. Duncan
LESSONS LEARNED FROM TECHNOLOGY TRANSFER OF AQUAPONICS
TECHNIQUES AND BUSINESS DEVELOPMENT THROUGH SMALL-SCALE
DEMONSTRATIONS

12:00 Edoardo Pantanella, Giuseppe Colla, Ram C. Bhujel
WATER USE AND NUTRIENT SINK IN AQUAPONICS

12:15 Edoardo Pantanella, Ram C. Bhujel, Giuseppe Colla, Win Myint
AQUAPONICS FOR LIVELIHOODS?

12:30 LUNCH

1:30 Eric Highfield
ALTERNATIVE ENERGIES FOR AQUAPONICS IN CONTROLLED ENVIRONMENT
AGRICULTURE

1:45 John Derksen, Montserrat Villanueva-vorvolla
COMPARISON OF NFT AND RAFT TECHNIQUE USING L.E.D. LIGHTING AND BASIL
IN AN AQUAPONICS SYSTEM

2:00 Donald Bailey, Dilip Nandwani
SELECTION OF AN AQUACULTURE PRODUCTION SYSTEM FOR FARMERS IN THE
U.S. VIRGIN ISLANDS

2:15 Luke Oliver, Shawn Coyle, Leigh Anne Bright, Zachary Kupchinsky, Doug Blair,
Chelsea Watts, James Tidwell
COMPARISON OF DIFFERENT LIGHT TECHNOLOGIES FOR INDOOR AQUAPONIC
PRODUCTION OF WHITE-STEMMED PAK CHOI Brassica rapa

2:30 Kurt Rosentrater, D. Allen Pattillo
COMPARISON OF LIGHT SOURCES IN AQUAPONICS SYSTEMS ON PRODUCTION
EFFICIENCIES AND RESULTING ECONOMICS

2:45 Matthew S. Recsetar, Anita M. Kelly, Brandon M. Baumhoer
YIELD COMPARISON OF TOMATO AND PEPPER PLANTS GROWN IN TWO
DIFFERENT GREENHOUSE AQUAPONIC SYSTEMS

3:00 Karen M. Buzby, Nicole L. Waterland, Kenneth J. Semmens, LianShin Lin
EVALUATING AQUAPONIC CROPS IN A FLOW-THROUGH FISH CULTURE SYSTEM

3:15 Sarah K. Taber
FOOD SAFETY IN AQUAPONICS
BIOFLOC WORKSHOP: THE TEXAS A&M AGRILIFE SUPER-INTENSIVE INDOOR SHRIMP BIOFLOC PROGRAM: SYSTEM DESIGN, OPERATION, AND COMMERCIALIZATION
Monday, February 10  1:30 - 4:30  Room 611
Chair: Peter Woods

1:30  Granvil Treece
Introduction

1:35  Tzachi Samocha
The Texas A&M AgriLife Biofloc System

1:55  Tzachi Samocha
Nursery Operations

2:10  Tim Morris
Commercial Biofloc Nursery Operations

2:30  Tzachi Samocha, Leandro Castro
DESIGN AND OPERATION NURSERY AND GROW-OUT BIOFLOC SYSTEMS AT THE TEXAS A&M AGRILIFE RESEARCH MARICULTURE LAB AT FLOUR BLUFF IN CORPUS CHRISTI, TEXAS

2:50  John Leffler, Jeff Brunson
POTENTIAL ENVIRONMENTAL CHALLENGES OF HYPER-INTENSIVE BIOFLOC GROWOUT SYSTEMS

3:10  BREAK

3:30  Terrill Hanson
ECONOMIC OVERVIEW OF BIOFLOC-DOMINATED, SUPER-INTENSIVE Litopenaeus vannamei GROW-OUT RACEWAY SYSTEMS

4:00  Tzachi Samocha
Summary & Questions

GENERAL NUTRITION
Monday, February 10  1:30 - 4:30  Room 618
Chairs: Ron Johnson, Lisa Armbruster

1:30  Steven Hughes, Jasmine Smalls
ASSESSMENT OF FEEDING EQUATIONS FOR NILE TILAPIA Oreochromis nilotica USING FISH WEIGHT, TEMPERATURE, AND DIGESTIBLE ENERGY

1:45  Seunghyung Lee, Yichuan Wang, Silas Hung, Anders Strathe, Nann Fangue, James Fadel
DEVELOPMENT OF OPTIMUM FEEDING RATE MODEL FOR WHITE STURGEON Acipenser transmontanus

2:00  Tim Markey, Scott Snyder, Jesse Trushenski
EFFECTS OF NUTRIENT DENSITY AND FEEDING REGIMEN ON HYBRID STRIPED BASS Morone chrysops × M. saxatilis PRODUCTIVITY
2:15 **Seunghyung Lee**, Liran Haller, Nann A. Fangue, James G. Fadel, Silas S. O. Hung
EFFECTS OF FEEDING RATES ON GROWTH PERFORMANCE AND ENERGY DEPOSITION OF SUBYEARLING WHITE STURGEON *Acipenser transmontanus*

2:30 **Matthew C.J. Taynor**, Jorge Suarez, Daniel D Benetti
DIETARY PROTEIN/ENERGY RATIOS FOR ADULT FLORIDA POMPANO *Trachinotus carolinus*: GROWTH, FEED AND NITROGEN UTILIZATION

2:45 **Muhammad Hafeez-ur-Rehman**, Muhammad Ashraf, Farzana Abbas, Khalid Javed Iqbal, Sydah Andleeb
EFFECT OF FEED WITH VARYING DIETARY PROTEIN LEVELS ON GROWTH, SURVIVAL AND RATE OF CANNIBALISM IN FRY REARING OF GIANT MURREL *Channa marulius*

3:00 **Yongfang Zhang**, Gregory A. Dudenhoeffer, Thomas R. Omara-Alwala
THE EFFECT OF DIETARY PROTEIN LEVEL ON THE GROWTH AND DIGESTIVE PROTEASE ACTIVITY IN JUVENILE BLUEGILL *Lepomis macrochirus*

3:15 **Wu Xiaoyi**, Delbert M. Gatlin III, Duncan S. MacKenzie
ALTERING DIETARY PROTEIN CONTENT IN MORNING AND EVENING FEEDINGS AFFECTS GROWTH AND AMMONIA EXCRETION OF RED DRUM *Sciaenops ocellatus*

3:30 **Mihai Sun**, Robert Hayward, Jeff Firman
MODELING ESSENTIAL AMINO ACID REQUIREMENTS OF YELLOW PERCH *Perca flavescens*

3:45 **Kiuomars Rohani-Ghadikolaei**, Eesa Abdolalian, Ng Wing-Keong
GROWTH AND SURVIVAL RATE OF *Penaeus indicus* LARVAE FED ON MICROALGAE *Isochrysis galbana* AND *Chaetoceros muelleri* CULTURED WITH DIFFERENT SEAWEED EXTRACTS

4:00 **Sergio Nates**, Kent Swisher
SUSTAINABILITY IN THE AQUACULTURE FEED INDUSTRY: IS THIS POSSIBLE?

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**GENETICS**
Monday, February 10  1:30 - 4:30  Room 606
Chair: Debbie Plouffe

1:30 **Miyako Kodama**, Marine Brieuc, Robert Devlin, Kerry Naish
APPROACHES TO GENOME MAPPING OF BIALLELIC MARKERS IN A RESIDUAL TETRAPLOID SPECIES, COHO SALMON, AND LOCATION OF QUANTITATIVE TRAIT LOCI ASSOCIATED WITH WEIGHT, LENGTH, GROWTH RATE AND AGE AT SEXUAL MATURITY

1:45 **Debbie Plouffe**, Marcia Chiasson, America Fujimoto, Jason Stannard, John Buchanan
A LOW DENSITY SINGLE NUCLEOTIDE POLYMORPHISM (SNP) PANEL FOR PARENTAGE ASSIGNMENT AND DETERMINATION OF GENETIC SEX IN A PEDIGREED POPULATION OF ATLANTIC SALMON *Salmo salar*
2:00 Daniel Drinan, Carl Ostberg, Kerry Naish
CONSTRUCTION OF A HYBRID GENETIC MAP WITH BI-ALLELIC MARKERS USING HYBRIDIZED RAINBOW Oncorhynchus mykiss AND YELLOWSTONE CUTTHROAT TROUT O. clarkii bouvieri

2:15 Thomas A. Delomas, Boris Gomelsky, Kyle J. Schneider, Ammu Anil
SIZE AND PLOIDY VARIABILITY IN SECOND GENERATION KOI × GOLDFISH HYBRIDS

2:30 Boris Gomelsky, Kyle Schneider, Ammu Anil
TRIPLOID KOI FEMALES DEVELOP LARGE OVARIES AND PRODUCE MASS ANEUPLOID PROGENY WHEN CROSSED WITH DIPLOID MALES

2:45 Dustin Moss, Shaun Moss, Steve Arce, Clete Otoshi
BREEDING FOR TAURA SYNDROME VIRUS RESISTANCE IN PACIFIC WHITE SHRIMP Penaeus (Litopenaeus) vannamei: A REVIEW OF PAST AND PRESENT RESEARCH

3:00 William Wolters, Gary Burr
SELECTION RESPONSES FOR CARCASS WEIGHT IN THREE ATLANTIC SALMON YEAR CLASSES

3:15 Hanping Wang, Paul O’Bryant, Dean Rapp, Hong Yao, Christopher Hartleb, William Lynch
STRATEGIES, RESPONSES AND PROSPECTS OF GENETIC IMPROVEMENT IN YELLOW PERCH

3:30 Terrence Tiersch, E Hu
MANAGEMENT OF GENETIC RESOURCES AND ESTABLISHMENT OF INDUSTRY STANDARDS THROUGH DOSE-BASED FERTILIZATION

3:45 Narayan Prasad Pandit, Masaru Nakamura
GROWTH PERFORMANCE AND GONADAL DEVELOPMENT OF HEAT-INDUCED STERILE NILE TILAPIA Oreochromis niloticus

4:00 Mohamed E. Megahed
ADOPTION OF DNA BARCodings IN FISHERIES AND AQUACULTURE IN EGYPT

4:15 Mohamed E. Megahed
MICROSATELLITE MARKER-BASED PEDIGREES IN SELECTIVE BREEDING OF CLOSED - THELYCUM SHRIMP Fenneropenaeus indicus

NUTRITIONAL PHYSIOLOGY
Monday, February 10 1:30 - 4:30 Room 615
Chair: Madison Powell

1:30 Dan Bearden, Miki Watanabe, Justin Yost, John W. Leffler, Tom Zeigler, Paul Sandifer, Mike Denson
METABOLOMICS ANALYSIS FOR LOW-POLLUTING FEEDS

1:45 Rodrigue Yossa, Olasupo Okubajo, Dayan A. Perera, Iniyavan Pushpalingam, Jonathan C. Eya
INTERACTIVE EFFECTS OF DIETARY PROTEIN SOURCES, DIETARY LIPID LEVELS AND WATER TEMPERATURES ON GROWTH, FEED UTILIZATION, ENZYME ACTIVITIES AND GENE EXPRESSIONS IN RAINBOW TROUT
2:00 Karolina Kwasek, Genciana Terova, Bong Joo Lee, Konrad Dabrowski
DIETARY METHIONINE ALTERS THE EXPRESSION OF GENES INVOLVED IN ITS METABOLISM IN ATLANTIC SALMON LIVER

2:15 Andreas Brezas, Madison Powell, Ken Overturf, Biswamitra Patro, Alejandro Villasante, Ronald Hardy
EFFECTS OF AMINO ACID SUPPLEMENTATION ON EXPRESSION LEVELS OF AMINO ACID TRANSPORTERS AND SYNCHRONIZATION OF PROTEIN DIGESTION IN RAINBOW TROUT FED PLANT-BASED FEEDS

2:30 Meghan Manor, Beth M. Cleveland, Gregory M. Weber, P. Brett Kenney
EFFECTS OF FEEDING LEVEL AND SEXUAL MATURATION ON PPAR-, mTOR-, AND FATTY ACID-RELATED GENE EXPRESSION IN LIVER, MUSCLE, AND VISCERAL ADIPOSE TISSUE OF DIPLOID AND TRIPLOID FEMALE RAINBOW TROUT

2:45 Madison Powell, Tracy Kennedy, Joyce Faler, Kenneth Overturf, Ronald Hardy
GENE EXPRESSION IN RAINBOW TROUT Oncorhynchus mykiss, NILE TILAPIA Oreochromis niloticus, AND WHITE STURGEON Acipenser transmontanus ERYTHROCYTES UNDER DIFFERING GLYCEMIC CONDITIONS

3:00 Morris Villarroel, Fernando Torrent, Javier Lopez-Luna
SHORT-TERM FASTING HAS LITTLE EFFECT ON RAINBOW TROUT WELFARE OR FLESH QUALITY

3:15 Simeon O. Ayoola, A. A. Idowu
CYTOGENETIC EFFECT OF BLACK JAW TILAPIA Sarotherodon melanotheron EXPOSED TO PAWPAW LEAF Carica papaya L. IN FISH FEED AS REPLACEMENT FOR RICE BRAN

3:30 Justin Yost, Daniel Bearden, John Leffler, Scott Snyder, Paul Sandifer, Michael Denson
DECREASED NUTRIENT POLLUTION FROM AQUACULTURE FEEDS THROUGH IMPROVEMENTS IN PHOSPHORUS UTILIZATION BY RED DRUM Sciaenops ocellatus

TOWN HALL ENGAGEMENT WITH FEDERAL AQUACULTURE PROGRAMS
Monday, February 10  3:00 - 4:30  Room 616
Chair: Jeff Silverstein
Moderator: Betsy Hart

This session provides an opportunity for direct dialogue with key aquaculture leaders and managers from diverse federal agencies with the goal of identifying critical issues, problems and/or opportunities for federal agencies to address in partnership with industry in 2014.

Interagency Working Group on Aquaculture and USDA/ARS (Jeff Silverstein)
USDA/APHIS-Veterinary Services (TJ Myers), USDA/NASS (Bruce Boess), USDA Agricultural Marketing Service (Mark Bradley), USDA Office of the Secretary (Max Holtzman), FDA-Center for Veterinary Medicine (Jennifer Matysczak), FDA-Center for Food Safety and Applied Nutrition (Brett Koonse), NOAA Fisheries (Michael Rubino), USFWS (David Hoskins), and USGS (Jill Rolland).
SPECIFIC EXAMPLES OF COMMUNITY EDUCATION/TRAINING AND STUDENT LEADERSHIP PROGRAMS DESIGNED TO PRESERVE AND ENHANCE THE AQUACULTURE INDUSTRY

Tuesday, February 11  8:30 - 10:00  Room 608
Chair: Debbie Granger

*Educate, Inspire, Motivate* – all necessary components of quality education/training programs required to preserve and enhance our aquaculture industry! Attend this session and hear about 5 significant programs to inspire & educate interested students and citizens to get the training, experience, knowledge, and leadership needed to pursue careers within the aquaculture sector. Whether your motive is to sustain the economic viability of coastal communities, inspire high school students to get involved, or to develop underutilized infrastructure for food production, this session provides realistic, hands-on education/training models and tools to adapt to your community’s needs.

8:30  Ray RaLonde
• Overview of Career & Technical Education (CTE) Student Leadership Opportunities (CTSO) in Alaska – FFA – including the curriculum components in the high school, the student ag/aquaculture experiences, and the competitions (state & regional)
• NOAA Aquaculture Program – the hands-on, practical, and thorough Training Model & Modules developed for Alaska shellfish growers in coastal communities

8:45  Kevin Fitzsimmons
• FFA program and competition in Arizona & U. of Arizona
• Training/Continuing Education models at U. of Arizona (short courses, etc.)

9:00  Earl Steele & Students from Bellingham Technical College Fisheries & Aquaculture Sciences Program – students discuss BTC’s 2-year educational program training students to work in finfish & shellfish culture, habitat restoration, and more! With a 95% job placement rate, graduates now can also transfer directly to several 4-yr colleges to earn a baccalaureate.

ENGINEERING

Tuesday, February 11  8:30 - 12:00  Room 618
Chairs: Ying Liu, Brian J. Vinci

8:30  John Colt, Barnaby Watten, Tim Pfeiffer
CARBON DIOXIDE STRIPPING IN AQUACULTURE

8:45  Ying Liu
THE STATUS AND FUTURE OF RECIRCULATING AQUACULTURE SYSTEMS IN CHIA

9:00  Peifeng Liu, Jiazheng Shen, Songming Zhu
AN EXPERIMENTAL STUDY ON NITRIFICATION USING A SERIES ROTATING ELECTROBIOLOGICAL CONTACTORS
9:15 Cristian Cifuentes, M. H. Kim
NUMERICAL SIMULATION OF SHIELDING EFFECT IN NETS UNDER STEADY CURRENT

9:30 Andrew Davison, Raul Piedrahita
DESIGN OF A LAND-BASED TANK AQUACULTURE SYSTEM OPTIMIZED FOR YEAR-ROUND TEMPERATURE STABILITY TO MAXIMIZE GROWTH OF Gracilaria pacifica

9:45 Tomas Mosquera, Raul H. Piedrahita
EQUILIBRIUM AND SORPTION KINETICS OF AMMONIA BY NATURAL ZEOLITE IN SIMULATED AQUACULTURE WASTEWATER

10:00 BREAK

10:30 Brian J. Vinci, Trond W. Rosten, Kristian Henriksen, Erik Skontorp Hognes, Steven T. Summerfelt
COMPARATIVE ECONOMIC AND ENVIRONMENTAL ANALYSIS OF LAND-BASED VERSUS NET PEN SALMON PRODUCTION

10:45 Fatemehsadat Fahandezhsadi, Ronald Malone
ASSIMILATION, BIOLOGICAL AMMONIA-NITROGEN REMOVAL IN ORNAMENTAL FISH HATCHERIES

AQUACULTURE 101
Tuesday, February 11 8:30 - 12:30 Room 613
Chair: Kathleen Hartman

8:30 Christa Speekmann, USDA APHIS
AQUATIC EXPORTS TO CANADA – 101

9:00 George Sanders, UW
RECOMMENDATIONS FROM AN AQUATIC VETERINARIAN

9:30 Eric Cassiano, UF TAL
YOUR FISH ARE SPAWNING…NOW WHAT? ADVENTURES IN MARINE LIVE FEEDS

10:00 BREAK

10:30 Larry Lawson, UF TAL
MANAGING AN AQUACULTURE FARM: FROM PERSONNEL TO PONDS AND MOST THINGS IN BETWEEN

11:00 Chris Bentley, MAAT
STANDING OUT IN THE CROWD – THE IMPORTANCE OF NICHE MARKETING IN SMALL SCALE AQUACULTURE

11:30 Sebastian Belle, Maine Aquaculture Association
BAD STUFF HAPPENS TO GOOD FARMERS; HOW TO LIMIT YOUR RISKS AND NOT REINVENT THE WHEEL

12:00 Jim Parsons, Troutlodge
THE MIDDLE GROUND: A CAREER SPENT TRANSLATING AQUACULTURE SCIENCE INTO ON-FARM SUCCESSES
BIOFLOC TECHNOLOGY
Tuesday, February 11    8:30 - 12:30    Room 611
Chairs: Andrew Ray, Dariano Krummenauer

8:30  John Hargreaves, Yoram Avnimelech, Hoang Tung, Craig Browdy
SUMMARY OF THE RECENT WORKSHOP ON BIOFLOC TECHNOLOGY AND
SHRIMP DISEASES IN HO CHI MINH CITY, VIETNAM

8:45  Bart Green
SOLIDS MANAGEMENT IN A CHANNEL CATFISH BIOFLOC TECHNOLOGY
PRODUCTION SYSTEM

9:00  Yoram Avnimelech and Malka Kochba
EVALUATION OF OPTIMAL BIOFLOC CONCENTRATION

9:15  David E. Brune
BIOPROCESSING OF MICROBIAL BIOMASS ENABLING SUSTAINABLE MARINE
SHRIMP PRODUCTION

9:30  John Leffler, Jeff Brunson, Luis Poersch, Stacey Moller, Kevin Pitts
DEVELOPMENT OF A MULTI-TROPHIC, BIOFLOC-BASED, POLYCULTURE SYSTEM
FOR PRODUCTION OF MARINE SHRIMP, RED DRUM, AND OYSTERS

9:45  Luis Poersch, John Leffler, Al Stokes, Jeff Brunson, Jacob Richardson, Kevin Pitts,
Carlos Gaona
SHRIMP CULTURE IN A BIOFLOC TECHNOLOGY (BFT) SYSTEM INTEGRATED
WITH OYSTERS, TILAPIA, AND RED DRUM

10:00 BREAK

10:30 Dariano Krummenauer, André Freitas, Carlos Gaona, Luis H. Poersch,
Wilson Wasielewsky Jr.
INFLUENCE OF AMMONIA ADDITION ON THE DEVELOPMENT OF MICROBIAL
FLOCS ON Litopenaeus vannamei BFT NURSERY PHASE

10:45 Jack Crockett, Jessica Morgan, Ivy McClellan, Addison Lawrence
EVALUATION OF INORGANIC NITROGEN CONTROL BY COMPARING TWO
ORGANIC CARBON APPLICATION RATES IN MINIMAL WATER EXCHANGE,
BIOFLOC, SHALLOW WATER, SHRIMP NURSERY SYSTEMS USING SC
FRUCTOOLIGOSACCHARIDE AS A CARBON SOURCE

11:00 Jack Crockett, Jessica Morgan, Ivy McClellan, Addison Lawrence
COMPARISON OF GROWTH IN MINIMAL WATER EXCHANGE, BIOFLOC, SHALLOW
WATER, SHRIMP NURSERY SYSTEMS BY USING TWO FEEDING PROTOCOLS

11:15 Tzachi Samocha, Leandro Castro, Wujie Xu, Terry Hanson, Tim Markey,
Tzachi Samocha
COMPARISON OF TWO COMMERCIAL FEEDS FOR THE PRODUCTION OF
MARKETABLE Litopenaeus vannamei IN SUPER-INTENSIVE BIOFLOC-DOMINATED
ZERO EXCHANGE RACEWAYS

11:30 Terry Hanson, Leandro Castro, Tom R. Zeigler, Tim Markey, Tzachi M. Samocha
ECONOMIC ANALYSIS OF A COMMERCIAL AND EXPERIMENTAL FEED USED IN
BIOFLOC-DOMINATED, SUPER-INTENSIVE, Litopenaeus vannamei GROW-OUT
RACEWAY SYSTEM – THE 2013 TRIAL
11:45 Wilson Wasielesky, Plinio Furtado, Gabriel Alves, Dariano Krummenauer, Luis Poersch
INFLUENCE OF HYDROGEN PEROXIDE ON *Litopenaeus vannamei* REARED IN BIOFLOC TECHNOLOGY SYSTEMS

**ADVANCES IN PADDLEFISH CULTURE AND MARKETING**
Tuesday, February 11  8:30 - 12:30  Room 602
Chairs: Rafael Cuevas, William P. Auberry

8:30 Alex Squadrito, Rafael Cuevas-Uribe, Steven Mims
EFFECTS OF LIVE VERSUS COMMERCIALY AVAILABLE PREPARED DIETS ON THE GROWTH AND SURVIVAL RATE OF POST LARVAL PADDLEFISH *Polyodon spathula*

8:45 Paul Auberry, Rafael Cuevas-Uribe, Steven Mims
COMPARATIVE MONOCULTURE OF HYBRID CATFISH AND PADDLEFISH IN KENTUCKY

9:00 Phillip Henderson, Rafael Cuevas-Uribe, Steven D. Mims
PRELIMINARY EVIDENCE ON THE CONTROL OF OFF-FLAVOR AND CYANOBACTERIA IN HYBRID CATFISH PONDS THROUGH BIOMANIPULATION USING PADDLEFISH

9:15 Godardo Juanich, Rafael Cuevas-Uribe, Steven Mims
WATER RECLAMATION FOR AQUACULTURE THROUGH OZONE AND/OR ULTRAVIOLET RADIATION TREATMENT

9:30 Daniel L. Aboagye, Peter J. Allen
EFFECTS OF ACUTE AND CHRONIC HYPOXIA ON THE METABOLIC AND ACID-BASE PARAMETERS OF THE AMERICAN PADDLEFISH *Polyodon spathula*

9:45 Ryan B. Shartau, Daniel Aboagye, Peter J. Allen, Colin J. Brauner
CO2 TOLERANCE AND ACID-BASE REGULATION IN PADDLEFISH *Polyodon spathula*

10:00 BREAK

10:30 Alex Philipchik, Siddhartha Dasgupta
MARKETING OF PADDLEFISH AMONG HISPANIC CONSUMERS

10:45 Siddhartha Dasgupta
ECONOMICS OF A SMALL-SCALE, VERTICALLY-INTEGRATED PADDLEFISH INDUSTRY
TUESDAY

TAURINE: CURRENT KNOWLEDGE AND FUTURE ROLES IN AQUACULTURE

Tuesday, February 11   8:30 - 12:30   Room 615

Chairs: Guillaume Salze, T. Gibson Gaylord

8:30 Wendy Sealey, T. Gibson Gaylord, Guillaume Salze
INTRODUCTION/OVERVIEW OF TAURINE AS INGREDIENT IN AQUACULTURE

8:45 Charlotte Conway
WHY WE NEED THE DATA FROM A REGULATORY PERSPECTIVE

9:00 Aaron Watson, Jonathan Peake, Jessica Miller, Allen Place
AN ANALYSIS OF TAURINE CONCENTRATIONS IN PREY ITEMS FROM WILD AND AQUACULTURE SETTINGS

9:15 Ronald B. Johnson
THE EFFECT OF SUPPLEMENTAL TAURINE ON GROWTH AND PROXIMATE COMPOSITION OF JUVENILE SABLEFISH Anoplopoma fimbria FED ALTERNATIVE PLANT PROTEIN FEEDS

9:30 Matt Hawkyard, Ben Laurel, Yoav Barr, Kevin Stuart, Mark Drawbridge, Chris Langdon
THE USE OF LIPOSOMES FOR THE ENRICHMENT OF ROTIFIERS WITH TAURINE AND THEIR SUBSEQUENT EFFECTS ON THE GROWTH OF MARINE FISH LARVAE

9:45 Guillaume Salze, Melanie Rhodes, D. Allen Davis
ESTIMATION OF THE QUANTITATIVE REQUIREMENT FOR DIETARY TAURINE IN FLORIDA POMPANO Trachinotus carolinus JUVENILES

10:00 BREAK

10:30 Guillaume Salze, Melanie Rhodes, D. Allen Davis, Dave Jirsa, Mark Drawbridge
EVALUATING TAURINE TOXICITY IN FLORIDA POMPANO Trachinotus carolinus AND WHITE SEABASS Atractoscion nobilis

10:45 Gibson Gaylord, Delbert Gatlin, Frederic Barrows, Aaron Nistler, Camilo Pohlenz
STABILITY OF SYNTHETIC TAURINE THROUGH EXTRUSION PROCESSING AND SUBSEQUENT BIOAVAILABILITY TO RAINBOW TROUT Oncorhynchus mykiss

11:00 Delbert Gatlin III, Alejandro Velasquez, Rick Barrows, Gibson Gaylord
ASSESSMENT OF TAURINE BIOAVAILABILITY IN PELLETED AND EXTRUDED DIETS WITH RED DRUM Sciaenops ocellatus

11:15 Lus M. López, Isaura Bañuelos-Vargas, Maricela Flores, Mario A. Galaviz, Conal D. True, Helena Peres
TAURINE ROLE ON THE METABOLIC MODULATION OF Totoaba macdonaldi JUVENILE FEED SOY PROTEIN CONCENTRATES

11:30 Guillaume Salze, Elizabeth Spangler, Paul Cobine, Melanie Rhodes, D. Allen Davis
IDENTIFICATION OF BIOMARKERS OF TAURINE DEFICIENCY IN FLORIDA POMPANO Trachinotus carolinus

11:45 Aaron Watson
EFFECTS OF DIETARY TAURINE SUPPLEMENTATION ON POTENTIAL TAURINE SYNTHETIC CAPACITY IN JUVENILE SABLEFISH Anoplopoma fimbria
REPRODUCTIVE PHYSIOLOGY
Tuesday, February 11     8:30 - 12:30     Room 620
Chairs: Brian Shepherd, Penny Swanson

8:30 E Hu, Terrence Tiersch
STANDARDIZED ON-SITE CRYOPRESERVATION FOR REPOSITORY DEVELOPMENT IN AQUATIC SPECIES

8:45 Abi Abinawanto, Zuraida Zuraida, Retno Lestari
COMBINATION EFFECT OF 5% OF METHANOL AND SKIM MILK ON SPERMATOZOA QUALITY OF JAVA BARB Barbonymus gonionotus 24 HOURS AFTER SUB-ZERO FREEZING

9:00 Karina Morales-Ueno, Jorge Alfaro-Montoya, Jorge A. Cáceres-Martínez, Eugenio Díaz-Iglesias, Héctor Castillo-Juárez, Carmen G. Paniagua-Chávez
A NOVEL METHOD FOR THE TRANSPORTATION OF WHITE LEG SHRIMP Penaeus vannamei SPERMATOPHORES

9:15 Konrad Dabrowski, MacKenzie Miller, Emily Hayes
FISH EMBRYO DECHORIONATION – NEW APPROACH, NEW RESULTS, AND NEW OPPORTUNITIES

9:30 Tetsuzan Benny Ron, Alon Naor
EFFECTS OF MELATONIN AND LIGHT ON REPRODUCTION IN SEABREAM

9:45 Brian Shepherd, Christopher B. Rees, Osvaldo J. Sepulveda Villet, Debra E. Palmquist, Fred P. Binkowski
IDENTIFICATION OF GENDER IN YELLOW PERCH Perca flavescens USING EXTERNAL MORPHOLOGY

10:00 BREAK

10:30 Nour Eissa, Han-Ping Wang, Zhigang Shen, Hiam Elabd, Vikas Kumar, Paul O’Bryant, Dean Rapp, Hong Yao, ElSayed Abou-ElGheit, Adel Shaheen
EFFECTS OF MATERNAL STRESS FROM DIFFERENT MATING SETS ON EGG QUALITY AND CHARACTERISTICS IN YELLOW PERCH: PHYSIOLOGICAL AND MOLECULAR ASPECTS

10:45 Craig V. Sullivan, Robert W. Chapman, Benjamin J. Reading, Paul E. Anderson
OVARIAN TRANSCRIPTOME RELIABLY PREDICTS EGG QUALITY IN WILD AND DOMESTICATED STRIPED BASS Morone saxatilis

11:00 Agnes Bardon-Albaret, Kenneth L. Jones, Eric A. Saillant
A RNA-SEQ ANALYSIS OF THE TRANSCRIPTOME OF UNFERTILIZED EGGS FROM WILD AND CAPTIVE RED SNAPPER FEMALES HORMONALLY INDUCED FOR OVULATION

11:15 Niha R. Chattopadhyay, Sarbani Dutta
RECENT UNDERSTANDING ABOUT THE ROLE OF PHOTO- THERMAL AND HORMONAL REGULATION ON MATURATION AND SPAWNING OF FISH

11:30 Nihar R. Chatterjee, Sarbani (Dutta) Ray
RECENT UNDERSTANDING ABOUT THE ROLE OF PHOTO-THERMAL AND HORMONAL REGULATION ON MATURATION AND SPAWNING OF FISH
11:45 Jay Dev Bista, Bharat Shrestha, Ram Kumar Shrestha, Surendra Prasad, Arun Baidya, Madhav Kumar Shrestha, Tek Bahadur Gurung
SPAWNING RESPONSE OF SAHAR Tor putitora IN DIFFERENT SEASONS UNDER POND REARED CONDITION IN POKHARA, NEPAL

12:00 Christianah Olaniyi, Damilola Adeniyi
EFFECT OF Moringa oleifera LEAF MEAL ON REPRODUCTIVE PERFORMANCE – HATCHABILITY, FECUNDITY, MILTS MOTILITY OF AFRICAN CATFISH

12:15 Marian Fairgrieve, Elizabeth K. Smith, J. Adam Luckenbach
EXPLORING POSSIBLE ROLES OF GONADAL KISSPEPTINS IN THE REPRODUCTIVE DEVELOPMENT OF SABLEFISH Anoplopoma fimbria

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HEALTH/DISEASE
Tuesday, February 11  8:30 - 2:00  Room 616
Chairs: Benjamin Beck, Eric Peatman

Sponsor: NOVUS

8:30 Eric Peatman, Chao Li, Brian Peterson, Benjamin Beck
MAPPING THE MICROBIOME OF ICTALURID CATFISH: TISSUE AND SPECIES-SPECIFIC COMMUNITY COMPOSITION

8:45 Victor Schmidt, Katherine Smith, Linda Amaral-Zettler
SALINITY ACCLIMATION YIELDS A REPEATABLE Aeromonas – Vibrio DOMINANCE SHIFT IN THE MICROBIOME OF A EURYHALINE FISH

9:00 Julia Pridgeon, Phillip Klesius
IDENTIFICATION, VIRULENCE, AND MASS SPECTROMETRY OF TOXIC ECP FRACTIONS OF WEST ALABAMA ISOLATES OF Aeromonas hydrophila OBTAINED FROM A 2010 DISEASE OUTBREAK

9:15 Kevin Snekvik, Dan Bradway
SURVEILLANCE TESTING FOR INFECTIOUS SALMON ANEMIA VIRUS IN THE PACIFIC NORTHWEST: THE LABORATORY PERSPECTIVE

9:30 Liqun Lu, Lijuan Xu, Podok Patarida
A NOVEL VIRAL DISEASE CAUSED BY CYPRINID HERPESVIRUS 2 INFECTION IN CRUCIAN CARP Carassius auratus gibelio

9:45 BREAK

10:30 Wansadaj Jaroenram, Jenny Elliman, Leigh Owens
RAPID AND SENSITIVE DETECTION OF Penaeus stylirostris DENSOVIRUS BY RECOMBINASE POLYMERASE AMPLIFICATION COMBINED WITH A LATERAL FLOW DIPSTICK

10:45 Julia Pridgeon, Phillip Klesius
ATTEMPT TO DEVELOP LIVE ATTENUATED BACTERIAL VACCINES BY SELECTING RESISTANCE TO GOSSYPOL, PROFLAVINE HEMISULFATE, NOVOBIOCIN, OR CIPROFLOXACIN
11:00  Benjamin H. Beck, Chao Li, Bradley D. Farmer, Eric Peatman
ANALYSIS OF THE Flavobacterium columnare TRANSCRIPTOME REVEALS GENE
EXPRESSION SIGNATURES MEDIATING VIRULENCE

11:15  Hyun-Sil Kang, Hyun-Ki Hong, Hee-Jung Lee, Taek-Kyun Lee, Young-Ok Kim,
Kwang-Sik Choi
MOLECULAR AND HISTOPATHOLOGIC SURVEY OF WILD PACIFIC OYSTER
Crassostrea gigas ON THE SOUTH COAST OF KOREA

11:30  LUNCH

1:00  Chika F. Ikeogu, Charity I. Nsofor, Lucy A. Nwuba
GILL PATHOLOGIC RESPONSES OF Clarias gariepinus TO SUBLETHAL
CONCENTRATIONS OF LEAD NITRATE AND CRUDE OIL

1:15  Shahid Mahboob Rana, F. Al-Misned, Z. Ahmad, Ghazala
CHOLINESTERASE: CHOLINERGIC BIOMARKERS FOR THE DETECTION OF
SUBLETHAL EFFECTS OF ORGANOPHOSPHORUS AND CARBAMATES IN Catla catla

1:30  Julia Pridgeon, Phillip Klesius
DEVELOPMENT OF LIVE ATTENUATED Streptococcus agalactiae AS POTENTIAL
VACCINES BY SELECTING FOR RESISTANCE TO SPARFLOXACIN

ZEBRAFISH HUSBANDRY WORKSHOP - CONTINUED
Tuesday, February 11  8:30 - 4:30  Room 607
Chair: Bobbi Bauer

FISH DISEASE PART I – Coordinated by Dr. Michael Kent

8:30  Donna Mulrooney
PCR DIAGNOSTICS FOR IMPORTANT MYCOBACTERIA SPECIES IN ZEBRAFISH

8:50  Sean Spagnoli
ZIRC DIAGNOSTIC ACTIVITIES

9:10  Marcus Crim
ZEBRAFISH DIAGNOSTICS AT IDEXX BIORESEARCH

9:30  Justin Sanders
CYTOKINES AND CHRONIC DISEASE IN ZEBRAFISH

WORKSHOP
9:50  Jennifer L. Strykowski
EFFECTIVENESS OF RECOMMENDED EUTHANASIA METHODS IN LARVAL
ZEBRAFISH Danio rerio

10:10  BREAK

WORKSHOP
10:30  Brandon Whipple
UNDERSTANDING ZEBRAFISH SALT SOURCES AND THEIR EFFECT ON Ph,
HARDNESS, AND OSMOREGULARITY

10:50  Lauren Krug
THE IMPACT OF LIGHT EMITTED FROM EXIT SIGNS ON ZEBRAFISH REPRODUCTION
11:10  Dan Castranova
THE EFFECT OF HOLDING TANK SIZE AND SHAPE ON REPRODUCTIVE PERFORMANCE IN PAIR AND INDIVIDUALLY HOUSED ZEBRAFISH

NUTRITION MINI-SESSION
11:30  Marc T. Tye, Lisa A. Schimmenti
EVALUATION OF FEEDING NON-HATCHING DECAPSULATED BRINE SHRIMP Artemia sp. CYSTS TO JUVENILE AND ADULT ZEBRAFISH Danio rerio

11:50  Maurine Hobbs
ROTIFER REARING AND FEEDING PROTOCOL

12:10  Abigail King, Konrad Dabrowski
IS LIVE FOOD FEEDING AVOIDABLE? THE EFFECT OF COMMERCIAL FEED ON GROWTH AND REPRODUCTIVE CAPACITY OF ZEBRAFISH

12:30  LUNCH

FISH DISEASES PART II – Coordinated by Dr. Michael Kent
1:30  Chris Whipps
MYCOBACTERIA IN ZEBRAFISH: RESOLVING STRAIN AND ISOLATE DIFFERENCES WITH M. marinum

1:50  Michael Kent
IN SITU TRACKING OF Pseudoloma IN LARVAL FISH; WHERE THE LIGHTS GO ON AND OFF

2:15  BREAK

ENRICHMENT MINI-SESSION
2:30  Dante D’India
IMPLEMENTING AN AQUATIC ANIMAL ENRICHMENT PROGRAM AT HARVARD MEDICAL SCHOOL

2:50  Patty Oden
COLOR PREFERENCES OF ZEBRAFISH, CAN THEY AFFECT MATING BEHAVIOR AND REPRODUCTIVE PERFORMANCE?

3:10  Chereen Collymore
ENVIRONMENTAL ENRICHMENT INFLUENCES PLACE PREFERENCE CHOICE IN SINGLE-HOUSZED ZEBRAFISH

IACUC MINI-SESSION
3:30  Stacy Pritt
BRINGING IACUCs UP TO SPEED ON AQUATICS

3:50  Monte Matthews
IACUC IN THE AQUATIC AGE

4:10  TBA

4:20  PANEL DISCUSSION

4:45  TOWN HALL MEETING
The IMSEGI session focus on the holistic theme of “ONE HEALTH: Conserving Healthy Ecosystems, to Maintain Healthy Animals, to Protect Human Health long-term”. Ecosystem Health topics include characterization of aquatic biodiversity, emerging pathogens (*Vibrio* spp.) and contaminants and climate change, species introductions, and endocrine disrupting chemicals (EDCs) such as metals, persistent organic pollutants (POPs: PCBs and PAHs) and non-POPs such as the herbicide glyphosate in mangrove sediment, water, shrimp and other aquatic species. Animal Health topics include diseases of shrimp/fish, EMS/AHPND by PCR and sequencing, mobile/transposable elements, heavy metal resistance in gut bacteria, horizontal gene transfer (HGT), epigenetics, antibiotics and antimicrobial resistance (AR), inbreeding and disease susceptibility, genome rearrangements, genetic pollution, and genetically engineered crops (GEs) in aquafeeds. Public Health issues include potential risks of AR and zoonotic diseases, GE crops and long-term effects on human health, and chronic diseases (insulin resistance, diabetes type 2, obesity, allergies, etc.) associated with consumption of seafood containing low-level EDCs such as metals, POPs, and non-POPs such as the herbicide glyphosate.

**Sponsors & Collaborators:** Environmental Genomics, Inc. (EGI), Southborough, MA 01772 USA; UNA SALUD/ONE HEALTH Genomics & Epigenetics Program, FUCOBI Foundation (Fundacion para la Conservacion de la Biodiversidad Acuatica y Terrestre), Quito, Ecuador.

**ECOSYSTEM HEALTH THEME – Moderators:** Acacia Alcivar-Warren, Bruno Gomez-Gil

**8:30** Acacia Alcivar-Warren  
IMSEGI SESSION AA2014: INTRODUCTION/WELCOME – UPDATE ON THE SHRIMP EPIGENOME PROJECT (shrimpENCODE)

**8:45** Acacia Alcivar-Warren and IMSEGI collaborators  
ONE HEALTH: EMS/AHPND, VIBRIOS, EDCs, HORIZONTAL GENE TRANSFER, GMOs, GENETIC POLLUTION, FOOD INSECURITY - WHO WILL SAVE THE WILD PACIFIC WHITELEG SHRIMP *Litopenaeus vannamei*?

**9:00** José A. Arreola-Lizárraga, Ramón Barraza-Guardado, Ramón Casillas-Hernández, Francisco Magallón-Barajas, Marco Antonio López-Torres  
THE ECOSYSTEM APPROACH TO SHRIMP FARMING: AN ANALYSIS ON THE NW MEXICO

**9:15** Benjamin Moll, Alberto Peña, Francisco Magallon, Elizabeth Cruz, Regina Elizondo  
SUSTAINABLE FARMING OF *Ulva* AND NATIVE BROWN SHRIMP IN MEXICO

**9:45** James Morris, Pam Fuller, David Knott, Peter Kingsley-Smith, Christine Buckel, Leslie Hartman  
INVASION OF THE SOUTHEAST U.S. AND GULF OF MEXICO BY THE ASIAN TIGER SHRIMP *Penaeus monodon* FABRİCIUS 1798
10:00  BREAK

ECOSYSTEM AND ANIMAL HEALTH THEMES – Moderators: Acacia Alcivar-Warren, Bruno Gomez-Gil
10:30  Rashimi Ranjan Mishra, Hrudaya N. Thatoi
MICROBIAL COMMUNITY STRUCTURE IN MANGROVES AFFECTED BY AQUACULTURE AND OTHER INDUSTRIAL EFFlUENTS

10:45  Timothy W. Flegel, Chu-Fang Lo
INTERIM PRIMERS FOR SPECIFIC DETECTION OF BACTERIAL ISOLATES THAT CAUSE ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND)

11:00  Acacia Alcivar-Warren and collaborators of THE SHRIMP EPigenOME PROJECT (shrimpENCODE) CONSORTIUM
IS EMS/AHPND A POTENTIAL RISK TO HUMAN HEALTH? A REVIEW OF EPIGENETIC MECHANISMS ASSOCIATED WITH EMERGING SHRIMP DISEASES AND ANTIBIOTIC RESISTANCE, AND A CALL FOR INCREASED FUNDING FOR BASIC RESEARCH ON THE SHRIMP EPigenOME

11:15  Bruno Gomez-Gil, Sonia Soto-Rodríguez
GENOMIC ANALYSES OF EMS-CAUSING STRAINS FROM MEXICO

11:45  Roger W. Doyle
BY HOW MUCH DOES INBREEDING INCREASE THE RISK AND SEVERITY OF SHRIMP DISEASE EPIDEMICS?

12:15  Nicholas Jeffery, T. Ryan Gregory, Acacia Alcivar-Warren
SYNERGY BETWEEN AQUACULTURE PROGRAMS, GENOME SIZE AND POLYPLOIDY ASSESSMENTS: BENEFITS FOR BOTH FIELDS

12:30  LUNCH

ANIMAL AND HUMAN HEALTH THEMES – Moderators: Bruno Gomez-Gil, Acacia Alcivar-Warren
1:30  Tracey Schock, Jessica R. Duke, Darryl Weldon, Jeff Brunson, John W. Leffler, Daniel W. Bearden
BIOCHEMICAL CHANGES IN PACIFIC WHITE SHRIMP Litopenaeus vannamei DURING A SUPERINTENSIVE AQUACULTURE GROWOUT, AN NMR-BASED METABOLOMIC ANALYSIS

2:00  David E. Brune
SUSTAINABLE MARINE SHRIMP PRODUCTION IN THE UNITED STATES: WATER QUALITY MANAGEMENT OPTIONS

2:30  Brittany Holmes, Terry Councell, Arlene Dunkin
U.S. DEPARTMENT OF AGRICULTURE’S PESTICIDE DATA PROGRAM RESULT SUMMARY OF CHEMICAL RESIDUES IN SOYBEANS, CATFISH, AND SALMON

3:00  Pedro Eslava Mocha, Wilson Ramirez-Duarte, Edwin Gomez Ramirez, Leslie Guzman Beltran, Hernan Hurtado Giraldo
PATHOLOGICAL EFFECTS OF SUBLETHAL EXPOSURES TO COMMERCIAL PRESENTATIONS OF GLYPHOSATE (ROUNDUP®) ON NATIVE FISH FROM THE COLOMBIAN ORINOCO
3:30 Diana Papoulias
CHEMICAL DISRUPTION OF NORMAL DEVELOPMENTAL AND REPRODUCTIVE PROCESSES IN CULTURED FISHES: IMPLICATIONS FOR HUMAN HEALTH

4:00 Nancy L. Swanson
GENETICALLY ENGINEERED CROPS AND THE DETERIORATION OF HEALTH IN THE UNITED STATES

4:30 ONE HEALTH – THE SHRIMP EPIGENOME (shrimpENCODE) CONSORTIUM
OPEN DISCUSSION: ON THE USE OF GMO SOYBEANS IN AQUAFEEDS - AND EXPERIMENTAL DESIGNS TO BE INCLUDED IN THE SHRIMP EPIGENOME PROJECT (shrimpENCODE) GRANT PROPOSAL

OFFSHORE AQUACULTURE MONITORING REQUIREMENTS AND PROTOCOLS – WORKING TOWARDS ASSESSMENT OF IMPACTS AND REGIONAL STANDARDS
Tuesday, February 11 10:30 - 12:30 Room 609
Chairs: Tetsuzan Benny Ron, Alan Everson

10:30 Alan Everson
OVERVIEW OF EFFORTS TO STANDARDIZE MONITORING AND EXPEDITE PERMITTING FOR OFFSHORE AQUACULTURE IN HAWAII AND THE U.S. PACIFIC ISLANDS

10:45 Neil Anthony Sims, Lisa Buck, Lorenzo Juarez, Nicole Kirchhoff, Jennica Lowell, Steven Page, Ken Robertson
WHAT ARE YOU WORRIED ABOUT? WATER QUALITY MONITORING IN OPEN OCEAN AQUACULTURE AS IF SCIENCE MATTERS

11:00 James A. Morris Jr., Carol S. Price, Kenneth P. Riley
ENVIRONMENTAL MONITORING FOR MARINE CAGE CULTURE: A GLOBAL PERSPECTIVE AND NATIONAL GUIDELINES

11:15 Jack Rensel
OPEN-OCEAN AQUACULTURE EFFECTS MONITORING: WORTHWHILE OR EFFECTIVE?

11:30 Michael Rust, Kevin Amos, April Bagwill, Walton Dickhoff, Lorenzo Juarez, James Morris, Michael Rubino
LEARNING FROM THE PINK FISH – CHANGES AND LESSONS FROM SALMON FARMING IN THE U.S.

11:45 Gavin Key
AT THE END OF OUR ROPE: DEVELOPING NEXT-GENERATION MARICULTURE ON A 4-KM SINGLE POINT MOORING

12:00 Tetsuzan Benny Ron, Peter Becker, Gavin Burnell
BUILDING COMMUNITY-BASED CMSP PROGRAMS WITH GIS MAPS OF LOCAL AND REGIONAL COASTAL USAGE PATTERNS

12:15 DISCUSSION
**PREBIOTICS, PROBIOTICS AND IMMUNOSTIMULANTS**  
Tuesday, February 11    10:30 - 12:30    Room 604  
Chairs: Sam Addo, Keith Filer

**Sponsor:** Alltech

**10:30** Samuel Addo, Donald A. Davis, Jeffery S. Terhune, Abel Carrias, Mark R. Liles  
**SHORT-TERM FEEDING EFFECTS OF PROBIOTIC STRAINS AND THEIR COMBINATION ON IMMUNE PARAMETERS AND* Streptococcus iniae* SUSCEPTIBILITY IN NILE TILAPIA* Oreochromis niloticus**

**10:45** Samuel Addo, Jeffery S. Terhune, Donald A. Davis, Abel Carrias, Mark R. Liles  
**LONG-TERM FEEDING EFFECTS OF THE PREBIOTIC PREVIDA® AND A PROBIOTIC STRAIN OF* Bacillus subtilis* ON GROWTH, IMMUNE PARAMETERS AND SUSCEPTIBILITY TO* Aeromonas hydrophila* INFECTION IN NILE TILAPIA* Oreochromis niloticus**

**11:00** Alejandro Velasquez, Delbert Gatlin  
**EFFECTS OF PREVIDA® ON GROWTH PERFORMANCE OF JUVENILE RED DRUM* Sciaenops ocellatus* FED DIETS WITH DIFFERENT PROTEIN LEVELS**

**11:15** Mahmoud Dawood, Shunsuke Koshio, Saichiro Yokoyama, Manabu Ishikawa  
**EFFECTS OF HEAT-KILLED* Lactobacillus plantarum* (LP20) SUPPLEMENTAL DIETS ON GROWTH PERFORMANCE, STRESS RESISTANCE AND IMMUNE RESPONSE OF RED SEA BREAM* Pagrus major**

**11:30** Giorgia Gioacchini, Elia Ciani, Andrea Pessina, Ana Rodiles Guerrero, Daniel L. Merrifield, Francesca Maradonna, Ike Olivotto, Cinzia Cecchini, Helena D'Cotta, Jean-François Baroiller, Oliana Carnevali  
**GROWTH AND APPETITE CONTROL DURING TILAPIA* Oreochromis niloticus* LARVAL DEVELOPMENT: ROLE OF A NEW PROBIOTIC FORMULATION**

**11:45** Chan Dara Khan, D. Allen Davis, Jeffery S. Terhune, Karen L. Veverica, William H. Daniels  
**THE POTENTIAL OF PONDTOSS™ AS A CONTROL OF COLUMNARIS IN TILAPIA* Oreochromis niloticus* AND ITS EFFECTS ON GROWTH PERFORMANCE**

**12:00** Keith Filer, Vaun Cummins  
**THE USE OF BIO-MOS® IN THE PRODUCTION OF AQUACULTURE SPECIES**

**12:15** Zoleykha Salaghi, Mohamadreza Imanpoor, Vahid Taghi Zade  
**THE EFFECT OF DIFFERENT LEVEL OF PRIMALAC PROBIOTIC ON SURVIVAL, HEMATOCRIT AND BIOCHEMICAL PARAMETERS IN PERSIAN STURGEON* Acipenser persicus* AFTER SALINITY STRESS**
LOW-COST FEED AND INPUT SOLUTIONS FOR SUSTAINABLE SMALL-SCALE AQUACULTURE IN DEVELOPING COUNTRIES
Tuesday, February 11     10:30 - 12:30     Room 608
Chairs: Hillary Egna, Kevin Fitzsimmons

10:30  Narayan P. Pandit, Madhav K. Shrestha, Nelson Pokhrel, James S. Diana
EFFECT OF DIFFERENT FERTILIZATION AND FEEDING SYSTEMS ON WATER QUALITY AND GROWTH PERFORMANCE IN NILE TILAPIA Oreochromis niloticus

10:45  Ana Milstein, Martha Hernández, Eucario Gasca-Leyva
TESTING INDUCTION OF PERiphyTON GROWTH AS A LOW-COST POSSIBILITY FOR SUSTAINABLE SMALL-SCALE TILAPIA CULTURE IN YUCATAN, MEXICO

11:00  Md. Abdul Wahab, Md. Nazmush Sakib, Russell J. Borski
EFFECT OF DIFFERENT FEEDING REGIMES ON GROWTH AND PRODUCTION PERFORMANCE OF AIR-BREATHING STINGING CATFISH, SHING Heteropneustes fossilis AND MAJOR CARPS IN POND POLycULTURE

11:15  Russell J. Borski, Evelyn Grace T. de Jesus-Ayson
ALTERNATE DAY FEEDING IS MORE COST EFFECTIVE THAN DAILY FEEDING FOR CULTURE OF MILKFISH IN BRACKISHWATER PONDS AND SEA CAGES

11:30  Nazael A. Madalla, Omary D. Kitojo, Sebastian W. Chenyambuga
EFFECT OF FEEDING LEVEL AND FREQUENCY ON PERFORMANCE OF Oreochromis niloticus FED DIETS CONTAINING MORINGA LEAF MEAL AND SUNFLOWER SEED CAKE

11:45  Caroline Nebo, Maeli Dal Pai Silva, Maria Célia Portella
MOBILIZATION AND RECOVERY OF ENERGY STORAGE IN NILE TILAPIA SUBMITTED TO FASTING AND REFEEDING

12:00  Daniel Adjei-Boateng, Collins Duodu Prah, Regina E. Edziyie, Kwamena K. Quagrainie
EFFECTS OF FERTILIZATION AND FEEDING LEVEL ON THE PRODUCTIVITY OF TILAPIA POND CULTURE IN GHANA

12:15  Julius O. Manyala, Kevin Fitzsimmons, Charles C. Ngugi, Josiah Ani, Henry Lubanga
ENHANCEMENT OF POND PRODUCTIVITY BY ORGANIC MANURE FERTILIZATION AND SUPPLEMENTARY FEEDING IN KENYA
LOW-COST SOLUTIONS FOR SUSTAINABLE SMALL-SCALE AQUACULTURE IN DEVELOPING COUNTRIES

Tuesday, February 11  1:30 - 4:30  Room 608
Chairs: Hillary Egna, Jenna Borberg, Stephanie Ichien

1:30  Sunila Rai, Sunil Poudel, Jiwan Shrestha
PRODUCTION PERFORMANCE OF DEDHUWA *Esomus danricus* IN MONOCULTURE AND POLYCUltURE WITH CARP IN CHITWAN, NEPAL

1:45  John Walakira, Joseph Molnar, Edith Nankya
SUSTAINABLE STRATEGY FOR CONTROLLING FISH DISEASE CONDITIONS USING BANANA *Musa* sp. LEAF EXTRACTS IN UGANDA

2:00  Héry Coulibaly
ROLE OF COLLABORATING PROGRAMS IN AQUACULTURE DEVELOPMENT IN MALI

2:15  Yaw B. Ansah, Emmanuel A. Frimpong
PROFITABILITY OF TWO POND AQUACULTURE BEST MANAGEMENT PRACTICES IN GHANA

2:30  Emmanuel Frimpong, Yaw Ansah, Steve Amisah, Daniel Adjei-Boateng
USING ON-FARM EXPERIMENTS TO UNTANGLE THE CAUSES OF LOW PRODUCTIVITY OF TILAPIA *Oreochromis niloticus* GROWN IN PONDS IN GHANA

2:45  Iris Fynn, Emmanuel Frimpong
ESTIMATING THE ACTUAL AND POTENTIAL PRODUCTION CAPACITY OF AQUACULTURE PONDS IN GHANA

3:00  Christopher F. Knud-Hansen
AN ECOLOGICAL APPROACH TOWARDS OPTIMIZING POND-SPECIFIC FERTILIZATION EFFICIENCIES FOR SEMI-INTENSIVE AQUACULTURE

STOCKING DENSITY ANALYSIS OF TWO SMALL INDIGENOUS SPECIES, PUNTI *Puntius sophore* AND DEDHUWA *Esomus danricus* TO IMPROVE SUSTAINABILITY OF TYPICAL SIX-SPECIES LARGE-CARP CULTURE SYSTEMS IN RURAL NEPAL

3:30  Jay D. Bista, Madhav K. Shrestha, Surendra Prasad, Narayan P. Pandit
ENVIRONMENTALLY FRIENDLY CAGE CULTURE: A SUCCESSFUL MODEL OF SMALL-SCALE AQUACULTURE FOR LIVELIHOOD OF FISHING COMMUNITIES IN NEPAL

3:45  Khalid Salie, Claude E. Boyd, Neelia du Buisson, Bernard Snyman
EVALUATION OF THE FUNCTIONING OF FARM DAMS IN CATCHMENTS IN THE STELLENBOSCH AREA OF SOUTH AFRICA

4:00  Sammy K. Macaria, Kwamena Quagrainie, Charles Ngugi, Judy Amadiva
AQUACULTURE PRODUCT DEVELOPMENT AND MARKETING INNOVATIONS FOR SUSTAINABLE SMALL-SCALE AQUACULTURE IN KENYA

4:15  Wilfrido Contreras-Sanchez, Alejandro Mcdonal-Vera, Ulises Hernández-Vidal, Sergio Hernandez-Garcia.
LOW COST PRODUCTION SYSTEMS FOR TROPICAL GAR *Atractosteus tropicus*
SEAFood SAFety, Standards AND hUMAn heAlth (gIlLS)
TUESDAY, February 11 1:30 - 3:30 Room 620
Chair: Roy Palmer

1:30  Barbara Montwill
ENSURE THE SAFETY OF IMPORTED FOOD – U.S. FDA PROPOSED RULES

1:45  Brett Koonse
WHAT ARE OTHER COUNTRIES DOING ON AQUACULTURE FARMS TO ENSURE THEIR PRODUCTS ARE SAFE AND CONSISTENTLY HIGH QUALITY...AND PROTECTING THEIR INDUSTRY AND MARKET SHARE?

2:00  Antonio Garza de Yta
GILLS IN MEXICO – LATEST DEVELOPMENTS

2:15  Christopher Speed
AQUACULTURE – THE MISSING EQUATION TO TRULY IMPACT HUMAN HEALTH

2:45  Roy Palmer
SEAFood & heAlth – THE IMPORTANCE OF AQUACULTURE

3:00  Changzheng Wang, Jiashuo Ma, Robert Durburow, Steven Mims, Lingyu Huang, Cecil Butler
USING ACIDIC ELECTROLYZED WATER TO REDUCE MICROBIAL LOAD ON HYBRID STRIPED BASS Morone chrysops × M. saxatilis

3:15  Hiroko Seki, Naoko Hamada-Sato
EFFECT OF VARIOUS SALTS ON IMP-DEGRADING ENZYME ACTIVITY IN AQUACULTURED COHO SALMON

BIOACTIVES AND MODIFIERS
TUESDAY, February 11 1:30 - 4:30 Room 604
Chair: Camilo Pohlenz

Sponsor: NOVUS

1:30  Armando Garcia-Ortega, Felipe Rodriguez-Moreno, Rosabel Velez de la Rocha, Maria Muy-Rangel, Lidia Robaina
EFFECT OF DIETARY SUPPLEMENTATION OF ASTAXANTHIN ON SKIN PIGMENTATION AND GROWTH IN SPOTTED ROSE SNAPPER Lutjanus guttatus

1:45  Jorge Fenucci, Emiliano Pisani, Ana Diaz, Susana Velurtas
EFFECT OF DIETARY CAROTENOIDS ON THE ARGENTINE SHRIMP BROODSTOCK Pleoticus muelleri BATE

2:00  Ghanshyam Nath Jha, Debajit Sarma, T. A. Qureshi, Trapti Jha
EFFECT OF BEETROOT Beta vulgaris AND APPLE Pyrus malus PEEL FORTIFIED DIETS ON GROWTH, BODY COMPOSITION AND TOTAL CAROTENOID CONTENT OF Barilius bendelisis
2:15 Marcelo M. Pedreira, Alcione E. Santos, Gustavo H. O. Mendes, Thais G. Santos, Daiane K. A. Pereira, Naiara C. Motta, Guilherme de S. Moura, Maria L. F. Dias, Jose C. E. Santos
LARVICULTURE OF Prochilodus argenteus CURIMATÃ-PACU WITH DIFFERENT COMMERCIAL DIETS AND FEEDING FREQUENCY

2:30 Sergio Castillo, Misael Rosales, Camilo Pohlenz, Delbert Gatlin
THE EFFECTS OF CALCIUM LACTATE ON GROWTH PERFORMANCE AND DIGESTIVE ENZYMES ACTIVITY OF RED DRUM Sciaenops ocellatus

2:45 Michal Wojno, Arlyn Mandas, Andreas Lemme, Konrad Dabrowski
EXPLORING THE EFFECT OF PLANT ATTRACTANTS ON CARP Cyprinus carpio PERFORMANCE

3:00 Simeon Ayoola, Adekunle Idowu
EFFECT OF Allium sativum ON GROWTH, FEED UTILIZATION AND HAEMATOLOGICAL PARAMETERS OF Clarias gariepinus JUVENILE

3:15 Diana Cuesta, M. del Pilar Sánchez-Saavedra
INCREASED GONAD GROWTH OF THE PURPLE SEA URCHIN Strongylocentrotus purpuratus FED WITH Macrocystis pyrifera AND Ulva lactuca ENRICHED WITH NUTRIENTS

3:30 Malte Lohölter, Susanne Kirwan, Angela Kuhn, Bernhard Eckel
INFLAMMATION – A CHALLENGE IN FISH NUTRITION

3:45 Craig L. Browdy, Ei Lin Ooi, Pham Minh Anh, Dagoberto Sanchez, Francisco S. Gomes
LABORATORY AND FIELD TRIALS ON PREVIDA® PREBIOTIC AND FISH HEALTH

DIETARY SPRAY-DRIED PLASMA NOT ONLY PROMOTES GROWTH BUT ALSO IMPROVES THE IMMUNOLOGICAL AND REDOX STATUS IN GILTHEAD SEA BREAM

4:15 Camilo Pohlenz, Brian Ray, Delbert M. Gatlin III
OPTIMIZATION OF A PLANT-BASED DIET FOR RED DRUM Sciaenops ocellatus WITH THE INCLUSION OF A YEAST CELL WALL EXTRACT: EFFECTS ON GROWTH AND INNATE IMMUNE PERFORMANCE

LIPIDS IN AQUACULTURE NUTRITION AND PHYSIOLOGY
Tuesday, February 11 1:30 - 4:30 Room 609
Chairs: Jesse Trushenski, Rebecca Lochmann

1:30 Christian Minjarez-Osorio, Mayra L. González-Félix, Martín Perez-Velazquez, Perla Urquidez-Bejarano
DIETARY LIPID REQUIREMENT OF JUVENILE GULF CORVINA Cynoscion othonopterus RAISED IN A RECIRCULATING AQUACULTURE SYSTEM

1:45 Biswamitra Patro, Ronald W. Hardy
PHOSPHOLIPID SUPPLEMENTATION IN AN ALL-PLANT PROTEIN DIET FOR JUVENILE RAINBOW TROUT
2:00  **Artur N. Rombenso**, Jesse T. Trushenski, Michael Schwarz, Steve Urick
SUCCESSFUL PARTIAL FISH OIL REPLACEMENT IN JUVENILE POMPANO FEEDS CONTAINING DIFFERENT OIL SOURCES

2:15  **Andrew Maina**, Rebecca Lochmann
FINISHING PERIOD REQUIRED TO PRODUCE CLA-ENHANCED CATFISH FILLETS AS A FUNCTIONAL FOOD

2:30  **Mayra González-Félix**, Martin Perez-Velazquez, Edith López-Yocupicio
EFFECT OF DIETARY LEVEL OF DOCOSAHEXAENOIC AND ARACHIDONIC ACIDS, AND n-3/n-6 RATIO ON BIOLOGICAL PERFORMANCE AND TISSUE COMPOSITION OF THE GULF CORVINA *Cynoscion othonopterus*

2:45  **Artur N. Rombenso**, Jesse T. Trushenski, Dave Jirsa, Mark Drawbridge
DHA AND ARA ARE ESSENTIAL TO MEET LC-PUFA REQUIREMENTS FOR JUVENILE YELLOWTAIL

3:00  **Konrad Dabrowski**, Malgorzata Korzeniowska, John Grayson, Karolina Kwasek, Michal Wojno
EFFECT OF LIVE FOOD ENRICHMENT WITH DHA AND ARA ON YELLOW PERCH LARVAE LIPIDS AND FATTY ACID COMPOSITION

3:15  **Michele Thompson**, Steven Rawles, Rebecca Lochmann
THE EFFECTS OF MENHADEN OIL, FLAXSEED OIL AND A DAIRY-YEAST PREBIOTIC ON GROWTH, HEALTH, FEED CONVERSION, SURVIVAL, CRITICAL MAXIMUM TEMPERATURE, AND BODY COMPOSITION OF SUNSHINE BASS

3:30  **Gurpreet Sehgal**, Jasmine Dhawan, Harjeet Sehgal
EFFECTS OF DIETARY LIPID AND WATER ALKALINITY LEVELS ON UTILIZATION OF A NATURAL CAROTENOID SOURCE, *Spirulina platensis* FOR COLOUR ENHANCEMENT IN GOLD FISH *Carassius auratus*

**MULTITROPHIC AQUACULTURE**
**Tuesday, February 11  1:30 - 4:30  Room 611**
Chair: George Brooks, Jr.

1:30  **Suzanne Boxman**, Brian McCarthy, Fei Zhong, Sarina Ergas, Maya Trotz, Andres Tejada-Martinez, Kevan Main
MODELLING NITROGEN TRANSFORMATIONS IN A PILOT SCALE MARINE INTEGRATED AQUACULTURE SYSTEM

1:45  **Michael Chambers**, Jessica Cranney, Jon Bunker, Win Watson, Huntting Howell
SMALL SCALE INTEGRATED MULTI-TROPHIC AQUACULTURE OF STEELHEAD TROUT *Oncorhynchus mykiss*, BLUE MUSSELS *Edulis mytilus* AND SUGAR KELP *Laminaria saccharina* FOR COASTAL FISHERS IN NEW HAMPSHIRE, USA

2:00  **Susan Laramore**, Richard Baptiste, Bryan Gordan, Paul Wills, Dennis Hanisak
INCORPORATION OF THE SEAWEED *Ulva lactuca* PRODUCED IN A LAND BASED IMTA SYSTEM AS A SUPPLEMENT OR PARTIAL REPLACEMENT FOR PELLETED DIETS IN THE PRODUCTION OF JUVENILE SHRIMP *Litopenaeus vannamei*

2:15  **Abdul Mateen**, Shahzad Maqsood Ahmad Basra, Saba Mahmood
GROWTH PERFORMANCE AND BODY COMPOSITION OF *Labeo rohita* AND *Oreochromis niloticus* UNDER REDUCED HARDNESS BY USING *Moringa olifera*
2:30 Joseph Brooker, John Scarpa, Paul Wills
DISTRIBUTION OF SURPLUS MICROALGAE IN A LAND-BASED INTEGRATED MULTI-TROPHIC AQUACULTURE SYSTEM

2:45 Scott Lindell, Jang Kim, Emma Green-Beach, Molly Peach, Morgan Beals, Charlotte Jornlid, Ashley Harrigan, Charles Yarish
CULTURING SEAWEED Gracilaria tikvahiae ON A OYSTER FARM IN WAQUOIT BAY, MASSACHUSETTS

3:00 Louis Landesman, Tamra Fakhoorian
USING RETIRED CATFISH PONDS TO GROW DUCKWEED Lemna turionifera FOR NICHE MARKETS

RECIRCULATING AQUACULTURE SYSTEMS
Tuesday, February 11  1:30 - 4:30  Room 618
Chair: Songming Zhu

1:30 Steven Van Gorder, Jura Jug-Dujakovic
AN EVALUATION AND COMPARISON OF THE BIOFILTRATION PERFORMANCE CHARACTERISTICS OF THE ROTATING BIOLOGICAL CONTACTOR (RBC) AND THE MOVING BED BIOREACTOR IN RECIRCULATING AQUACULTURE SYSTEMS

1:45 Xian Li, Jean Paul Blancheton, Ying Liu
EFFECT OF OXIDATION-REDUCTION POTENTIAL ON PERFORMANCE OF EUROPEAN SEABASS IN RECIRCULATING AQUACULTURE SYSTEMS

2:00 Kuoqiu Yan, Kun Xiang
CONSTRUCTION TECHNOLOGY ON RAS FOR RAINBOW TROUT SEEDLING CULTURE

2:15 KC Hosler
TASTE OF BC AQUAFARMS MODEL TROUT FARM RAS SYSTEM INTEGRATES NEW TECHNOLOGIES AND LOW HEAD SYSTEMS FOR COST EFFECTIVE AND DUPLICATABLE COMMERCIAL PRODUCTION

2:30 Paul Wills, Christopher Robinson, Christopher Wilson
TESTS OF THREE PILOTS SCALE DEVICES TO CONTROL THE FLAVOR TAINING COMPOUNDS 2-METHYLISOBORNEOL AND GEOSMIN IN RECIRCULATING AQUACULTURE SYSTEMS

2:45 Steven Summerfelt, Timothy Pfeiffer, Lauren Jesscovitch, Ethan Metzger, Dane Schiro
EFFICIENCY OF LOW-LIFT PUMPING AND AERATION PROCESSES USED TO GAS BALANCE WATER AT THE SIDE OF CIRCULAR TANKS

3:00 John Davidson, Kevin Schrader, Bruce Swift, Eric Ruan, Jennifer Aalhus, Manual Juarez, Christopher Good, William Wolters, Gary Burr, Steven Summerfelt
EVALUATING DEPURATION PROCEDURES TO MITIGATE OFF-FLAVOR FROM HARVEST SIZE ATLANTIC SALMON Salmo salar CULTURED IN A LAND-BASED RECIRCULATING AQUACULTURE SYSTEM
3:15 Christopher Good, John Davidson, Ryan Earley, Elizabeth Lee, Gregory Weber, Steven Summerfelt
EFFECTS OF WATER EXCHANGE RATE AND TREATMENT PROCESSES ON WATER-BORNE HORMONES IN RECIRCULATION AQUACULTURE SYSTEMS CONTAINING SEXUALLY MATURING ATLANTIC SALMON *Salmo salar*

**SABLEFISH**

Tuesday, February 11    1:30 - 4:30    Room 602
Chairs: Rick Goetz, Adam Luckenbach

1:30 George Nardi
AN UPDATE ON THE STATUS OF COMMERCIAL SABLEFISH CULTURE IN NORTH AMERICA

1:45 Kenneth C. Massee, Thomas H. Wade, Matthew A. Cook, Cortney Jensen, Frederick W. Goetz
SABLEFISH BROODSTOCK COLLECTION METHODOLOGIES FOR USE IN AQUACULTURE

2:00 Jose Guzman, Adam Luchenback, Frederick Goetz, Mollie Middleton, Penny Swanson
CHARACTERIZATION OF THE REPRODUCTIVE PHYSIOLOGY OF SABLEFISH: DEVELOPMENT OF APPROACHES TO OVERCOME THE BLOCK TO PUBERTY

2:15 Samuel Sanchez, Carmen Paniagua-Chavez, Charles Weirich, Manuel Segovia
CRYOPRESERVATION OF SABLEFISH *Anoplopoma fimbria* SPERM AS AN STRATEGY TO DRIVE ITS CULTURE IN MEXICO

2:30 Douglas Immerman, Frederick Goetz
SABLEFISH *Anoplopoma fimbria* SPERM: THE PHYSIOLOGY OF ACTIVATION AND THE DEVELOPMENT OF A CRYOPRESERVATION PROTOCOL

2:45 William Fairgrieve, Adam Luckenbach
CHARACTERIZATION OF SEX-SPECIFIC GROWTH IN FARMED SABLEFISH *Anoplopoma fimbria*

3:00 J. Adam Luckenbach, William T. Fairgrieve
PROGRESS TOWARD THE GENERATION OF MONOSEX SABLEFISH FOR AQUACULTURE – COMPLETE SEX INVERSION OF JUVENILES VIA DIETARY STEROID TREATMENT

3:15 Matthew Cook, Jonathan Lee, Kenneth Massee, Thomas Wade, Sean Oden, Cort Jensen, Frederick Goetz
THE EFFECT OF REARING TEMPERATURE ON GROWTH AND SURVIVAL OF SABLEFISH *Anoplopoma fimbria* LARVAE

3:30 Jonathan Lee, Matthew A. Cook, Tom Wade, Barry A. Berejikian, Frederick W. Goetz
DEVELOPMENT OF SMALL REPLICABLE TANKS FOR SABLEFISH AQUACULTURE RESEARCH: EFFECTS OF LIGHT INTENSITY AND FEED DENSITY
THE EFFECT OF SUPPLEMENTAL TAURINE ON GROWTH AND PROXIMATE COMPOSITION OF JUVENILE SABLEFISH Anoplopoma fimbria FED ALTERNATIVE PLANT PROTEIN FEEDS

4:00 Aaron Watson, Ronald Johnson, Shin-Kwon Kim, Lisa Armbruster, Kenneth Webb, Allen Place
EFFECTS OF DIETARY TAURINE SUPPLEMENTATION ON POTENTIAL TAURINE SYNTHETIC CAPACITY IN JUVENILE SABLEFISH Anoplopoma fimbria

STRIPED BASS GROWERS ASSOCIATION INDUSTRY FORUM
Tuesday, February 11  1:30 - 4:30  Room 615
Moderator: Jim Ekstrom

1:30 Jim Ekstrom, Ekstrom Enterprises
WALTER LANDRY MEMORIAL AWARD

1:45 Mike Freeze, Keo Fish Farms, Inc.
UPDATES FROM THE NATIONAL AQUACULTURE ASSOCIATION

2:00 Christa Speekmann, USDA/APHIS/VS
THE STATUS OF HYBRID STRIPED BASS BEING EXPORTED INTO CANADA

2:15 Jim Bowker, USFWS
RESEARCH SUPPORTING FDA APPROVAL OF AQUI-S20E AND UPDATES ON APPROVALS FOR AQUAFLOOR AND CHLORAMINE-T

2:30 Delbert Gatlin, Texas A&M University
UPDATE ON NUTRITION RESEARCH AT TEXAS A&M UNIVERSITY

2:45 Adam Fuller, SNARC
UPDATE ON SNARC HYBRID STRIPED BASS RESEARCH

3:00 Jesse Chappell, Auburn University
THE CULTURE OF HYBRID STRIPED BASS IN AN IN-POND RACEWAY SYSTEM

3:15 Jesse Trushenski, Southern Illinois University
UPDATE ON HYBRID STRIPED BASS RESEARCH AT SIU

3:30 Carole Engle, University of Arkansas at Pine Bluff
UPDATE ON HYBRID STRIPED BASS RESEARCH AT UAPB

3:45 Anita Kelly, University of Arkansas at Pine Bluff
2013 U.S. HYBRID STRIPED BASS INDUSTRY SURVEY

4:00 STRIPED BASS GROWERS ASSOCIATION ANNUAL MEETING AND SBGA BOD MEETING
USTFA
Tuesday, February 11  1:30 - 4:30  Room 613
Chair: Sean Nepper, USTFA President

1:30  Sean Nepper
USTFA UPDATE

1:45  Jim Bowker
USFWS AQUACULTURE DRUG APPROVAL FOR TROUT

2:00  Kyle Martin
EVALUATION OF FLAVOBACTER RESISTANT STRAIN OF RAINBOW TROUT

2:15  Jeff Hinshaw
Weissella UPDATE

2:30  Gary Fornshell
BIOSECURITY ON A FARM LEVEL

3:30  USTFA BOD MEETING – OPEN TO GENERAL MEMBERSHIP

WEDNESDAY, February 12

EDUCATION
Wednesday, February 12  8:30 - 10:00  Room 604
Chair: David Cline

8:30  David Cline
BUILDING A BETTER POWER POINT PRESENTATION

8:45  Joseph Molnar, E. William Tollner
USING CELL PHONES TO ADVANCE AQUACULTURE DEVELOPMENT IN AFRICA: MODELS AND STRATEGIES FOR IMPLEMENTATION

9:00  Tosan Fregene, Francisca Oraemeka
IMPACT OF FARMER FIELD SCHOOL (FFS) IN EXTENSION DELIVERY ON AQUACULTURE DEVELOPMENT IN OYO STATE, NIGERIA

9:15  Tetsuzan Benny Ron, Glenn Martinez, Barbara McLain
A NOVEL INTEGRATED AQUAPONICS TRAINING PROGRAM FOR THE PACIFIC ISLANDERS

9:30  David Cline
REACHING THE NEXT GENERATION OF AQUACULTURISTS THROUGH YouTube VIDEOS

9:45  Roy Palmer
AquaEd – GLOBAL PLATFORM FOR EDUCATION
UNUSUAL FISH LOSSES OF FATHEAD MINNOWS, GOLDEN SHINERS, AND BREAM IN ARKANSAS DURING THE WINTER OF 2012/2013

8:45 Brian Ham, Chris A. Myrick, Frederic T. Barrows, Glenn Duff, Carl Yeoman, Mark Maskill, Wendy M. Sealey
EVALUATION OF THE EFFECT OF PELLET TYPE ON GROWTH OF SNAKE RIVER CUTTHROAT TROUT Oncorhynchus clarki bouvieri

9:00 Thomas Harder, Gordon G. Gotsch, Robert C. Summerfelt
GROWTH RESPONSE OF TANK-CULTURED WALLEYES Sander vitreus IN A WATER REUSE AQUACULTURE SYSTEM AFTER FOUR MONTHS OF COLDBANKING

9:15 Vikas Kumar, Han-Ping Wang, Zhigang Shen, Nour Eissa, Hong Yao, Hiam Elabd, Dean Rapp, Paul O’Bryant
NUTRITIONAL QUALITY OF DIFFERENT STRAINS OF YELLOW PERCH: IMPLICATIONS TO HUMAN NUTRITION

9:30 Muhammad Samee Mubarik, Bilal Ahmad, Naureen Aziz Qureshi, Syed Makhdoom Hussain
SURVIVAL OF Oreochromis niloticus UNDER TREATED WASTE WATER

9:45 Christianah Olaniyi, Emmanuel Alalade, Rashidat Shittu
HATCHABILITY AND SURVIVAL OF AFRICAN CATFISH FRIES USING DIFFERENT SOURCES OF WATER

10:00 BREAK

11:00 Jacky Phosa
INVESTIGATION ON THE PERFORMANCE OF FISH LARVAE REARING FACILITIES AT TURFLOOP FISH HATCHERY IN LIMPOPO PROVINCE, SOUTH AFRICA

CHARACTERIZATION OF RAINBOW TROUT Oncorhynchus mykiss PRODUCTION SYSTEMS IN THE MEXICAN HIGHLANDS

11:30 Iván Gallego-Alarcón, Selene Ortíz-Velázquez, Cristina Burrola-Aguilar, Iván Cervantes-Zepeda, Daury García-Pulido
ASSESSMENTS OF RAINBOW TROUT Oncorhynchus mykiss ALBINO BREED IN A RECIRCULATING AQUACULTURE SYSTEM

11:45 Bartholomew W. Green, Steven D. Rawles, T. Gibson Gaylord, Frederick T. Barrows, Catherine J. Childress and Matthew E. McEntire
USE OF DIETS FORMULATED FOR SUMMER WATER TEMPERATURES IN POND PRODUCTION OF HYBRID STRIPED BASS
**OFFSHORE AQUACULTURE**  
Wednesday, February 12     8:30 - 12:30     Room 618  
Chair: Jennica Lowell

8:30  **Adi Kellermann**  
THE INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (ICES) AND ITS ROLE FOR MARINE AQUACULTURE

8:45  **Paul Olin**, Randy Lovell  
OFFSHORE MARINE FINFISH AQUACULTURE IN CALIFORNIA: DREAM OR NIGHTMARE?

9:00  **Jennica C. Lowell**  
ENVIRONMENTAL MONITORING WORKS! HAWAII’S REGULATORY FRAMEWORK AND RESULTS FROM THE REQUIRED WATER QUALITY AND BENTHIC MONITORING OF AN OFFSHORE FINFISH FARM

DEVELOPMENT AND IMPLEMENTATION OF VERTICALLY-INTEGRATED AQUACULTURE OF PACIFIC RED SNAPPER *Lutjanus guttatus* IN COSTA RICA

9:30  **Dallas Meggitt**, Gary Loverich  
AUTONOMOUS, UNATTENDED WAVE-POWERED ENERGY SYSTEMS FOR OFFSHORE AQUACULTURE

9:45  **Matthew Koskela**, Stephen Page, Gabriel Matthias  
HYDRAULIC FEED DISTRIBUTION FOR SUBMERGED OPEN OCEAN NET PENS

11:00  **Federico Rotman**, Michael Cremer, Constance Silbernagel, Mark Drawbridge  
THE USE OF FINE-MESH COPPER ALLOY CAGES FOR NURSERY PRODUCTION OF WHITE SEABASS *Atractoscion nobilis*

10:00  BREAK

11:15  **Terry Drost**  
SOLUTIONS FOR NET MANAGEMENT IN OFFSHORE CONDITIONS

11:30  **Brandon Sackmann**, Tarang Khangaonkar, Christopher Krembs  
DEVELOPING HI-RESOLUTION SATELLITE PRODUCTS TO SUPPORT MARINE AQUACULTURE: BRINGING FARM-SCALE APPLICATIONS INTO FOCUS

**SUSTAINABLE AQUACULTURE**  
Wednesday, February 12     8:30 - 12:30     Room 608  
Chair: Jonathan Van Senten

8:30  **Ole Torrissen**  
THE ENVIRONMENTAL COSTS OF NORWEGIAN SALMON FARMING IN A RETROSPECTIVE PERSPECTIVE

8:45  **Ian Forster**, Biswajit Biswas, Lawrence Albright, Mahmoud Rowshandeli  
CYCLICAL FEEDING STRATEGY TO REDUCE ENVIRONMENTAL IMPACT OF MARINE SALMON FARMING
9:00  Liping Liu, Wenbo Zhang, Francis Murray, David Little, Peter Edwards  
RECENT TRENDS AND FUTURE PROSPECTS IN PRODUCTION AND  
INTERNATIONAL TRADE OF CHINESE FARmed SEAFOOD  

ADVANCES IN THE SUSTAINABILITY EVALUATION OF THE MEXICAN AQUACULTURE  

9:30  Héry Coulibaly, Bourema Traore, Seydou Toe  
ROLE OF COLLABORATING PROGRAMS IN AQUACULTURE PRACTICE IN DEVELOPING COUNTRY  

9:45  BREAK  

11:00  Jonathan van Senten  
THE DEVELOPMENT OF THE FAO CODE OF CONDUCT FOR RESPONSIBLE FISHERIES (CCRF) AQUACULTURE QUESTIONNAIRE  

11:30  Tosan Fregene, Tosin Fabowale  
CULTURED FISH SUPPLY CHAIN AND CONSTRAINTS OF ACTORS ALONG THE CHAIN IN OGUN STATE, NIGERIA  

11:45  Mohamed E. Megahed  
EMERGING PROBLEMS WITH RECENT INTRODUCTION OF INDIAN WHITE SHRIMP *Fenneropenaeus indicus* IN EGYPT  

**WATER QUALITY**  
Wednesday, February 12  
8:30 - 12:30  
Room 609  
Chair: John Farrelly  

8:30  John Farrelly, Yushun Chen, Sagar Shrestha, Matthew Recsetar, David Heikes, Carole Engle  
WATER QUALITY IN SPLIIT, INTENSIVELY AERATED, AND TRADITIONAL EARTHEN PONDS IN SOUTHEAST ARKANSAS  

8:45  Li Zhou, Claude E. Boyd  
FERTILIZATION OF PONDS FOLLOWING SEDIMENT REMOVAL  

9:00  Hisham Abdelrahman, Li Zhou, Claude E. Boyd  
EFFECTS OF AERATION ON WATER TEMPERATURE AND POND EVAPORATION  

9:15  Li Zhou, Claude E. Boyd  
TOTAL AMMONIA NITROGEN REMOVAL BY ZEOLITE IN LABORATORY TRIALS  

9:30  Shibo Gao, Peilun Lin, Zonglou Guo, Wei Wang  
REMOVAL EFFICIENCY OF CHLORPYRIFOS, BPA AND 4-NP IN SUBSURFACE FLOW CONSTRUCTED WETLANDS  

9:45  Julio Enrique Ramos Chávez, Carmen Paniagua Chávez, Manuel A. Segovia  
EFFLUENT TREATMENT OF A RECIRCULATING AQUACULTURE SYSTEM WITH DIFFERENT STRAINS OF MICROALGAE AND CYANOBACTERIA
10:00  BREAK

11:00  Rick Johnson  
SUSTAINABILITY THROUGH ADVANCED BIOLOGICAL TREATMENT OF MARINE RECIRCULATING AQUACULTURE SYSTEM EFFLUENT

11:15  Juan Pablo Gonzalez Hermoso, Emilio Peña Messina, Manuel A. Segovia  
ENHANCED BIOREMEDIATION OF WASTEWATER FROM A RECIRCULATING AQUACULTURE SYSTEM USING FOUR DIFFERENT PRETREATMENTS

11:30  Yihua Xia, Kuichuan Sheng, Shaoping Qian  
STUDY ON THE TREATMENT OF TURTLE-BREEDING WASTE WATER WITH WATER HYACINTH

11:45  Dave Anderson, Alex Leshnick, Bill Charneski  
EVALUATION OF A COMMERCIAL SCALE ELECTROCHEMICAL OXIDATIVE SYSTEM: REMOVAL OF AMMONIA, NITRITE, AND NITRATE

12:00  Sharon Nuñal, Sheila Mae Santander-De Leon, Takeshi Yoshikawa, Hiroto Maeda  
ENHANCED BIOREMEDIATION OF HEAVY OIL-CONTAMINATED SEDIMENT BY COMBINED BIOSTIMULATION AND BIOAUGMENTATION STRATEGIES

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**AMERICA’S TILAPIA ALLIANCE**

Wednesday, February 12     8:30 - 12:30     Room 613

Chair: Mike Picchietti

8:30  Willie Core  
TILAPIA FEED COSTING QUALITY AND FUTURE ISSUES

9:00  Carlos V. Martinez  
THE FIZZY BOX, A HAND MADE, LOW TECH, EFFICIENT, AERATION DEVICE

9:30  William Martin  
LARGE SCALE RAS PRODUCTION IN USA, THE FUTURE OF FISH

10:00  Gaston Dupree  
LARGE SCALE FILLET PRODUCTION C. AMERICA FOR U.S. MARKET

10:30  BREAK

11:00  Rob Ellis  
U.S. RAS PRODUCTION: SMALLER PRODUCERS JOINED TO MARKET IN A COOP MODEL

11:30  Dave Erdal  
U.S. FISH AND WILDLIFE POINT MAN FOR THE INAD Methyl testosterone UPDATE ON MT FDA

12:00  Israel Snir  
TILAPIA’S ROLE IN THE GLOBAL PICTURE

12:30  LUNCH

1:30  ATA ANNUAL MEETING
INGREDIENT EVALUATION

Wednesday, February 12     8:30 - 3:00     Room 602
Chair: Rick Barrows

8:30  John Bowzer, Jesse Trushenski
      RESEARCH AND DEVELOPMENT OF ASIAN CARP- DERIVED FISH MEAL FOR
      AQUACULTURE FEEDS

8:45  Dave Jirsa, Pete Nicklason, Michael Rust, Mark Drawbridge
      USE OF FISH PROCESSING TRIMMINGS TO REPLACE INDUSTRIAL FISH
      MEAL AND FISH OIL IN FEEDS FOR WHITE SEABASS Atractoscion nobilis AND
      CALIFORNIA YELLOWTAIL Seriola lalandi

9:00  Joy Campbell, Ronald Hardy, Biswamitro Patro, Javier Polo, Joe Crenshaw
      PERFORMANCE OF RAINBOW TROUT FED DIETS SUPPLEMENTED WITH SPRAY-DRYED PLASMA

9:15  Misael Rosales, Sergio Castillo, Camilo Pohlenz, Delbert Gatlin
      EVALUATION OF DISTILLERS YEAST AND FERMENTATION BIOMASS AS PARTIAL
      FISHMEAL REPLACEMENTS IN THE DIET OF RED DRUM Sciaenops ocellatus

9:30  Thomas O’Neill, Jesse Peach, T. Gibson Gaylord, Frederic T. Barrows,
      Stephanie Block, Wendy M. Sealey
      REFINING INCLUSION LEVELS OF GRAIN DISTILLERS DRIED YEAST IN
      COMMERCIAL-TYPE AND PLANT-BASED DIETS FOR JUVENILE RAINBOW TROUT
      Oncorhynchus mykiss

9:45  Thomas Welker, Chhorn Lim, Keshun Liu, Phillip Klesius
      EVALUATION OF DISTILLER’S DRIED GRAINS WITH SOLUBLES (DDGS) FROM
      DIFFERENT GRAIN SOURCES AS DIETARY PROTEIN FOR HYBRID TILAPIA
      Oreochromis niloticus × O. aureus

10:00 BREAK

11:00 Ivy McClellan, Addison Lee Lawrence, Jessica Morgan, Susmita Patnaik
      EVALUATION OF DIFFERING LEVELS OF CANOLA PROTEIN CONCENTRATE AS A
      POTENTIAL FISH MEAL REPLACEMENT IN Litopenaeus vannamei DIETS

11:15 Yangen Zhou, Xiaoyun Fang, Katia Oliveira, Denghang Yu, Rebecca L. Cook,
      Melanie A. Rhodes, D. Allen. Davis
      GROWTH RESPONSE OF CORN PROTEIN CONCENTRATE IN PRACTICAL DIETS
      FOR PACIFIC WHITE SHRIMP Litopenaeus vannamei

11:30 Fabio Soller, Eric Bell
      CORN PROTEIN CONCENTRATE IN AQUACULTURE DIETS

11:45 Dong-Fang Deng, Zhi Yong Ju, Warren Dominy, Joannie Dobbs, Marcus Kenny,
      Peter Sherlock
      DUCKWEED Lemna spp. PROVIDES A POTENTIAL PROTEIN SOURCE FOR
      FEEDING PACIFIC WHITE SHRIMP Litopenaeus vannamei

12:00 Zachary Kupchinsky, Leigh Anne Bright, Shawn Coyle, James Tidwell
      EVALUATION OF HETEROTROPHIC ALGAE MEAL AS A PROTEIN SOURCE IN
      CHANNEL CATFISH Ictalurus punctatus DIETS
12:15 Janice Ragaza, Shunsuke Koshio, Roger Edward Mamauag, Manabu Ishikawa, Saichiro Yokoyama, Shiela Villamor
DIETARY SUPPLEMENTAL EFFECTS OF RED SEAWEED *Eucheuma denticulatum* ON GROWTH PERFORMANCE, CARCASS COMPOSITION AND BLOOD CHEMISTRY OF JUVENILE JAPANESE FLOUNDER *Paralichthys olivaceus*

12:30 LUNCH

1:30 Rebecca Cook, D. Allen Davis, Katia Oliveira, Denghang Yu, Melanie A. Rhodes
GROWTH PERFORMANCE OF FLORIDA POMPANO *Trachinotus carolinus* FED PRACTICAL DIETS WITH COTTON SEED FLOUR PROCESSED BY VARYING METHODS

1:45 Md Shah Alam, Wade Watanabe, Austin Anderson, Patrick Carroll, Thomas Wedegaertner
REPLACEMENT OF MENHADEN FISH MEAL PROTEIN BY GENETICALLY IMPROVED AND SOLVENT-EXTRACTED LOW GOSSYPOL COTTONSEED FLOUR IN THE DIET OF JUVENILE BLACK SEA BASS *Centropristis striata*

2:00 Frederic Barrows, Jason Frost, Aaron Nistler, Mark Portman, Carly Stone, Nicolas Leonard
DETERMINATION OF THE NUTRITIONAL AND ECONOMIC VALUE OF A PROTEIN CONCENTRATE MADE FROM NUT PROCESSING WASTE FOR RAINBOW TROUT *Oncorhynchus mykiss*

2:15 Erlinda S. Ganzon-Naret
GROWTH RESPONSES AND FEED INTAKE OF *Lates calcarifer* TO FOUR DIFFERENT DIETARY PROTEIN LEVELS WITH GREEN PEA *Pisum sativum* UNDER CONTROLLED LABORATORY CONDITION

2:30 Gavin Key
SOY PROTEIN CONCENTRATE AND BYPRODUCT-BASED ALTERNATIVE PROTEIN SOURCES FOR POST-FISHMEAL HIGH VALUE MARINE FINFISH CULTURE

### PHYSIOLOGY

Wednesday, February 12  8:30 - 3:00  Room 607
Chair: Ken Overturf

8:30 Konrad Dabrowski, Timothy Parker, Karolina Kwasek, Michal Wojno
THERMAL AND HYPOXIC THRESHOLDS FOR GROWTH OF CYPRINID FISHES – A REVIEW

8:45 Brian Shepherd, Gregory J. Fischer, James A. Held, Christopher F. Hartleb, Kendall Holmes, Jeffrey A. Malison
COMPARATIVE EFFECTS OF CONSTANT VERSUS FLUCTUATING THERMAL REGIMENS ON YELLOW PERCH GROWTH, FEED CONVERSION AND SURVIVAL

9:00 Nour Eissa, Han-Ping Wang, Zhigang Shen, Hiam Elabd, Vikas Kumar, Paul O’Bryant, Dean Rapp, ElSayed Abou-EIgheit, Adel Shaheen
TRANSCRIPTIONAL EXPRESSION OF HSP-70, IGF-I AND OXIDATIVE STRESS GENES IN RESPONSE TO HANDLING AT DIFFERENT WATER TEMPERATURES IN YELLOW PERCH
MOLECULAR CLONING AND EXPRESSION PROFILE OF THREE SEX-SPECIFIC GENES UNDER TWO REARING TEMPERATURES DURING SEX DIFFERENTIATION IN YELLOW PERCH

SEXUAL DIMORPHIC EXPRESSION OF GENES BEFORE AND DURING SEX DIFFERENTIATION UNDER THERMAL OR HORMONAL EFFECTS IN BLUEGILL

COMPARATIVE TRANSCRIPTOMICS OF CHRONIC HIGH TEMPERATURE EFFECTS ON GEOGRAPHIC STRAINS OF CHANNEL *Ictalurus punctatus* AND HYBRID *I. punctatus* × *I. furcatus* CATFISHES

PHOTOPERIOD TREATMENT AND SEXUAL MATURATION ARE ASSOCIATED WITH DYNAMIC CHANGES IN THE FAST MUSCLE MICRORNA TRANSCRIPTOME IN ATLANTIC COD

SUBLETHAL EFFECTS OF ELEVATED NITRATE ON ATLANTIC SALMON *Salmo salar*

IMPACT OF AERATION AND ALKALINITY ON THE WATER QUALITY AND PRODUCT QUALITY OF TRANSPORTED TILAPIA

TANK DESIGN AND BUFFER TO REDUCE TRANSPORTATION STRESS OF WALLEYE *Sander vitreus*

LIVE TRANSPORTATION OF POND- VS. CAGE-REARED HYBRID STRIPED BASS

UV RADIATION EFFECT ON SURVIVAL AND GROWTH, AND QUANTIFICATION OF FREE-RADICALS IN POSTLARVAL STAGES OF THE RED SHRIMP *Pleoticus muelleri*

**CATFISH**

Wednesday, February 12  8:30 - 4:30  Room 615

Chairs: Nagaraj Chatakondi, Jimmy Avery

BREEDING STRATEGY OF U.S. FARM-RAISED CHANNEL CATFISH *Ictalurus punctatus* AFFECTS PROGENY PRODUCTION AND PERFORMANCE

LOW TEMPERATURE EXPOSURE TO POST-VITELLOGENIC CHANNEL CATFISH *Ictalurus punctatus* EXTEND REPRODUCTIVE READINESS
9:00 Matthew S. Recsetar
2013 YIELD VERIFICATION RESULTS FROM 13 SPLIT POND PRODUCTION SYSTEMS IN ARKANSAS

9:15 Ganesh Kumar, Carole Engle
ECONOMIC AND INVESTMENT ANALYSES OF ALTERNATE CATFISH FARMING TECHNOLOGIES

9:30 Ganesh Kumar, Carole Engle
ADOPTION OF ALTERNATE PRODUCTION TECHNOLOGIES IN CATFISH INDUSTRY

9:45 Matthew S. Recsetar
PRODUCTION RESULTS FROM A 2-YEAR VERIFICATION PROGRAM OF CATFISH PONDS USING INTENSIVE AERATION (> 11.7_kwh/ha; 6.4 hp/ac)

10:00 BREAK

11:00 Lisa Bott, Terrill R. Hanson, Luke A. Roy, Jesse A. Chappell
PRODUCTION AND ECONOMICS OF HYBRID CATFISH Ictalurus punctatus × Ictalurus furcatus RAISED IN AN IN-POND RACEWAY SYSTEM IN WEST ALABAMA

11:15 Terrill Hanson, Luke Roy, Lisa Bott, Gregory N. Whitis, Jesse A. Chappell
ALABAMA YIELD VERIFICATION PROGRAM – CATFISH COST OF PRODUCTION

11:30 Lisa B. Bott, Luke A. Roy, Terrill R. Hanson, Gregory N. Whitis, Jesse A. Chappell
THE USE OF A YIELD VERIFICATION PROGRAM TO EVALUATE PRODUCTION METHODS ON A HYBRID CATFISH PRODUCTION OPERATION THAT USES INTENSIVE AERATION (10 HP/ACRE) IN WEST ALABAMA

11:45 Terrill R. Hanson, Corey Courtwright
REGRESSION MODELING OF PRODUCTION AND PROFITABILITY FOR THE WEST ALABAMA CATFISH INDUSTRY

12:00 Terrill R. Hanson, Corey Courtwright
A FARM MANAGEMENT APPROACH TO CONTROL YELLOW FILLET IN PROCESSED CATFISH

12:15 Terrill R. Hanson, Corey Courtwright
A FARM MANAGEMENT APPROACH TO CONTROL OFF-FLAVOR IN PROCESSED CATFISH

12:30 LUNCH

1:30 Gregory Whitis, Terry Hanson, Luke Roy, Jesse Chappell, Lisa Bott
FIELD VALIDATION OF THE FISHY SOFTWARE PROGRAM FOR CATFISH PRODUCTION USING THREE YEARS OF PRODUCTION DATA FROM AN ALABAMA POND VERIFICATION TRIAL

1:45 William A. Wurts
CHANNEL CATFISH FOOD CONVERSION RATIOS, FEEDING RATES AND GROWTH

2:00 Forrest Wynne
SIZE SELECTIVE CHANNEL CATFISH Ictalurus punctatus HARVEST TO STOCK KENTUCKY FEE FISHING PONDS
2:15  **Gregory Whitis**  , Terry Hanson, Luke Roy, Jesse Chappell, Lisa Bott
USING GRADED FINGERLINGS IN INTENSIVE COMMERCIAL CATFISH PRODUCTION: REALITY, MYTH, AND DOES IT REALLY MATTER?

2:30  **Anita Kelly**, Nagaraj Chatakondi, Jeff Baxter
THE EFFECT OF TRIPLOID INDUCTION ON PRODUCTION OF HYBRID CATFISH UNDER COMMERCIAL CONDITIONS

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**ECONOMICS AND MARKETING**

Wednesday, February 12  8:30 - 5:00  Room 606
Chair: Madan Dey

8:30  **Miroslav Batka**, Siwa Msangi, Mimako Kobayashi, Stefania Vannuccini, Madan M. Dey, James L. Anderson
FISH TO 2030: MODELING GLOBAL SEAFOOD MARKET

8:45  **James L. Anderson**, Siwa Msangi, Mimako Kobayashi, Miroslav Batka, Stefania Vannuccini, Madan M. Dey
FISH TO 2030: BASELINE PROJECTION

9:00  **Madan M. Dey**, Siwa Msangi, Mimako Kobayashi, Miroslav Batka, Stefania Vannuccini, James L. Anderson
FISH TO 2030: AQUACULTURE DISEASE SCENARIO

9:15  **Frank Asche**, Atle Oglend
THE STATISTICAL AND ECONOMIC RELATIONSHIP BETWEEN FISHMEAL AND SALMON PRICES

9:30  **Gunnar Knapp**
SALMON FARMING ECONOMICS

9:45  **Jose Fernandez-Polanco**, Ana Horrillo, Ignacio Llorente
MARKET DETERMINANTS OF THE FREQUENCY OF SEAFOOD PROMOTIONAL SALES AT SUPERMARKETS

10:00 BREAK

11:00  **Ganesh Kumar**, Carole Engle
TECHNOLOGY ADOPTION IN AQUACULTURE: THE CURIOUS CASES OF SHRIMP, SALMON, AND TILAPIA FARMING

11:15  **Carole Engle**, Kamina Johnson, Bruce Wagner
COMPARATIVE ECONOMICS OF U.S. CATFISH PRODUCTION STRATEGIES: EVIDENCE FROM A CROSS-SECTIONAL SURVEY

11:30  **Diego Valderrama**, Luz Adriana Velasco
AN ECONOMIC MODEL FOR THE FARMING OF-native SCALLOP SPECIES IN THE CARIBBEAN BASIN

11:45  **Madan Dey**, Mark Rosegrant, Rowena Valmonte-Santos, Oai Li Chen, Kamal Gosh
ANALYSIS OF ECONOMIC IMPACT OF ADAPTATION STRATEGIES FOR THE AQUACULTURE/FISHERIES SECTOR UNDER CLIMATE CHANGE: METHODOLOGY AND RESULTS FROM VANUATU AND TIMOR LESTE
12:00 Kamal Gosh, Madan Dey, Oai Li Chen
ANALYZING THE USE OF FISH FOR FOOD SECURITY IN FIJI AND SOLOMON ISLANDS: CLIMATE CHANGE PERSPECTIVES

12:15 Roy Endré Dahl, Frank Asche, Sigbjorn Tveteraas
VOLATILITY REGIMES IN AQUACULTURE MARKETS: SPECIES AND PRODUCTS

12:30 LUNCH

1:30 Mohammad Hasan, Yoonsuk Lee, Madan Dey
FORECASTING OF POND BANK PRICES OF U.S. FARM-RAISED CATFISH: EFFECT OF THE PRESENCE OF OUTLIERS

1:45 Cathy Roheim, Hirotsgu Uchida, Robert Johnston, Seth Tuler
LONG-RUN HEALTH RISKS AND PERCEPTIONS: IMPLICATIONS FOR WILLINGNESS TO PAY FOR SEAFOOD

2:00 Kristin Helen Roll, Frank Asche, Atle G. Guttormsen, Ragnar Tveteras
PRODUCTION GROWTH, INNOVATION AND ENVIRONMENTAL CHALLENGES – THE GROWTH OF NORWEGIAN SALMON FARMING

2:15 Robert Nelson, Chao Wang
BRAND EQUITY AMONG PRODUCERS OF CHINESE MITTEN CRAB Eirocheir sinensis

2:30 Cathy Roheim, Sha Sha, Julie Insignares Santos, Frank Asche
MEDIA COVERAGE OF PCB CONTAMINATION OF FARMED SALMON: THE RESPONSE OF U.S. IMPORT DEMAND

2:45 Jeffrey Peterson
THE VALUE OF CERTIFICATION

3:00 BREAK

3:30 Dan Kauffman, Martha Walker
CONSUMER EVALUATIONS OF FRESHWATER PRAWNS Machrobrachium rosenbergii EATEN AT HOME AFTER PURCHASE AT A HIGH-END U.S. GROCERY

3:45 Richard Bryant, Siddhartha Dasgupta, Angela Caporelli, Laura Tiu
RESTAURANT PERCEPTIONS OF LOCALLY GROWN FRESHWATER SEAFOOD IN KENTUCKY AND OHIO

4:00 B. Tosan Fregene, Tosin A. Fabowale
CONSUMER PREFERENCE FOR CULTURED FISH IN Ogun State, Nigeria

4:15 James Bukenya, Maurice Ssebisubi, Joseph Molnar, Nelly Isyagi
MARKET LINKAGES BETWEEN FARM-RAISED AND WILD-CAUGHT FISH IN UGANDA

4:30 Thomas Fletcher
DEVELOPING SEAFOOD INDUSTRIES: EXAMINING FACTORS AFFECTING MARICULTURE IN THE PACIFIC NORTHWEST
ISSUES AFFECTING AQUATIC VETERINARY PROGRAMS & PRACTICE
Wednesday, February 12  8:30 - 5:00  Room 616
Chair: Dave Scarfe

10:30  Jiashuo Ma, Robert Durborow, Catherine Frederick, Tiffany Ogunsanya, Andrew Redden, Khamisi Campbell, Walter Kahill
DISEASE CASES EXAMINED AT THE KENTUCKY STATE UNIVERSITY FISH DISEASE DIAGNOSTIC LABORATORY FROM 2009 THROUGH 2013

10:45  Christopher Good, Timothy Welch
WEISSELLOSIS Weissella sp. IN NORTH CAROLINA: AN IMPORTANT EMERGING DISEASE IN USA FARMED RAINBOW TROUT Oncorhynchus mykiss

11:00  Myron J. Kebus
COMPARING FISH FARMERS TO POULTRY FARMERS WHEN IT COMES TO ANIMAL HEALTH

11:15  Myron J. Kebus
THE ECONOMICS OF FISH HEALTH FOR FISH FARMERS AND VETERINARIANS

11:30  David Scarfe
EDUCATIONAL AND TRAINING OPPORTUNITIES FOR THE PRACTICING AQUATIC VETERINARIAN

11:45  A. David Scarfe, Myron Kebus
MODEL CERTIFICATES OF VETERINARY INSPECTION USEFUL FOR ENSURING DISEASE-FREE MOVEMENT OF FISH

12:00  Joanne Constantine
CANADIAN AQUATIC ANIMAL HEALTH REGULATIONS

12:30  LUNCH

1:30  Elizabeth Rumley
AQUACULTURE AND THE LACEY ACT

2:00  Jennifer Matysczak
FDA-CVM AQUATIC VETERINARY PROGRAMS, INITIATIVES & NEWS

2:30  Brett Koonse
FDA-CFSAN PROGRAMS, INITIATIVES AND REGULATIONS ASSURING SEAFOOD SAFETY

3:00  Lee Ann Thomas
USDA-APHIS-VS AQUATIC VETERINARY PROGRAMS, INITIATIVES AND REGULATIONS

3:30  BREAK

3:45  Mark Mason
MODULE 13: AQUATIC ANIMAL HEALTH REGULATIONS AND HEALTH CERTIFICATION
EXTENSION
Wednesday, February 12   11:00 - 12:30   Room 604
Chair: Laura Tiu

11:00 Artur N. Rombenso, Viviana Lisboa, Luis A. Sampaio
PROMOTING MARICULTURE IN SOUTHEAST BRAZIL

11:15 Brian L. Nerrie
VIRGINIA'S AQUACULTURE EXTENSION MODEL: MARKET DRIVEN

11:30 Laura Tiu, Estefania James
AQUACULTURE BOOT CAMP: EVALUATION OF A NEW AND BEGINNING FARMER TRAINING PROGRAM

11:45 Ganesh Kumar, Carole Engle
CRITICAL FACTORS ENHANCING TECHNOLOGY ADOPTION

12:00 Noel Novelo, Terrence Tiersch
ULTRASONOGRAPHY – A GENERAL APPROACH TO INTEGRATING NEW TECHNOLOGY IN RESEARCH AND COMMERCIAL AQUACULTURE

12:15 Tetsuzan Benny Ron
THE NEED FOR A MODERNIZED PROFESSIONAL DEVELOPMENT PROGRAM FOR AQUACULTURE EXTENSION AGENTS

MARINE FISH CULTURE
Wednesday, February 12   1:30 - 3:00   Room 618
Chair: Artur Rombenso

Sponsor: Novus

1:30 John Stieglitz, Daniel Benetti, Ronald Hoenig, Jorge Suarez, Carlos Tudela, Zack Daugherty
IMPROVEMENT OF METHODS FOR COMMERCIAL-SCALE HATCHERY PRODUCTION OF MAHI-MAHI Coryphaena hippurus

1:45 Martin Perez-Velazquez, Mayra L. González-Félix, Perla Urquidez-Bejarano, Christian Minjarez-Osorio
EFFECTS OF SALINITY ON GROWTH, SURVIVAL, AND PLASMA OSMOLALITY OF JUVENILE GULF CORVINA Cynoscion othonopterus

2:00 Erik Oberg, Cynthia Faulk, Lee Fuiman
OPTIMAL RATION FOR JUVENILE PIGFISH GROW-OUT
2:15 Melanie Rhodes, Rebecca Cook, Denghang Yu, Katia Oliveira, Guilherme Sassi, D. Allen Davis, Terry Hanson
RESPONSE OF FLORIDA POMPANO TO INCREASING NUMBERS OF FEEDINGS

2:30 Artur N. Rombenso, Cauê B. Moreira, Fernanda B. Candiottto, Luis A. Sampaio, Mônica Y. Tsuzuki
FEEDING FREQUENCY AFFECT GROWTH OF JUVENILE COBIA CULTURED IN NEAR-SHORE CAGES

DISCUSSION OF POTENTIAL FOR A U.S. AQUACULTURE CHECKOFF PROGRAM
Wednesday, February 12 1:30 - 3:00 Room 607
Moderator: Dan Vogler

The U.S. Aquaculture industry is broadly challenged to communicate a positive message to the American public about the benefits of domestic aquaculture and the consumption of farm raised seafood. Development of a U.S. Aquaculture Checkoff Program could provide the resources necessary to widely convey a positive message and shift public opinion about U.S. Aquaculture and its products. Join in the developing discussion of the potential for U.S. Aquaculture to re-invest in itself.

ALTERNATIVE FEEDS DEVELOPMENT
Wednesday, February 12 3:30 - 5:00 Room 602
Chair: Ian Forster

3:30 Ian Forster, Briony Campbell, Bruce Morton, Brad Hicks, Mahmoud Rowshandeli, Nahid Rowshandeli, Kassandra McFarlane, Kate McGivney
OPTIMIZATION OF FISHMEAL, FISH OIL AND WHEAT IN DIETS FOR JUVENILE SABLEFISH Anoplopoma fimbria USING MIXTURE METHODOLOGY

3:45 Gary Burr, William Wolters, Frederic Barrows, Casey Grimm, Michael Dowd
GROWTH EVALUATION OF ATLANTIC SALMON Salmo salar RAISED IN SEAWATER OR FRESHWATER AND FED EITHER FISHMEAL BASED OR MARINE-FREE DIETS

4:00 Frederic Barrows, Jason Frost, Steven Craig, Mark Portman, Clete DeShazer
DETERMINATION OF THE THERMAL OPTIMA FOR GROWTH AND DEVELOPMENT OF ALTERNATIVE FISH-MEAL FREE DIETS FOR COHO SALMON Oncorhynchus kisutch

4:15 Gibson Gaylord, Wendy Sealey, Frederic Barrows, Gary Fornshell, Christopher Myrick, Carolyn Ross
ALTERNATIVE PROTEIN DIETS FOR RAINBOW TROUT AND THE POTENTIAL TO REDUCE DIETARY CRUDE PROTEIN LEVELS

4:30 Gary Fornshell, Wendy M. Sealey, T. Gibson Gaylord, Frederic T. Barrows, Christopher A. Myrick, Carolyn Ross
ALTERNATIVE PROTEIN DIETS FOR RAINBOW TROUT: PERFORMANCE ON A COMMERCIAL TROUT FARM

4:45 Omolola Betiku, Gibson Gaylord, Frederic Barrows, Chris Myrick, Carolyn Ross, Gary Fornshell, Wendy Sealey
ALTERNATIVE PROTEIN DIETS FOR RAINBOW TROUT: PERFORMANCE IN A LABORATORY TRIAL
1:30 Gleyn Bledsoe, Barbara Rasco
AQUACULTURE AS A SUCCESSFUL AND SUSTAINABLE INSTRUMENT FOR AFFECTING ECONOMIC RECOVERY AND DEVELOPMENT IN A POST WAR ENVIRONMENT

1:45 Joseph R. Sullivan
BOOTSTRAPPING AQUACULTURE FROM PRODUCTION TO MARKETING IN DEVELOPING NATIONS – A CASE EXAMPLE IN LIBERIA

2:00 Angela Caporelli, Marty Riche
ASSESSMENT AND RECOMMENDATIONS FOR TWO SITES WITH ACTIVE AND POTENTIAL AQUACULTURE PRODUCTION IN RIFT VALLEY AND COAST PROVINCES, KENYA

2:15 Antonio Garza de Yta
AwF IN MEXICO – LATEST DEVELOPMENTS

2:30 Scott Lindell, Rick Karney
NEW AQUACULTURE LEARNING CENTERS IN MEXICO; AwF AND FARMER-TO-FARMER REVIEW

2:45 Roy Palmer
AwF – LATEST DEVELOPMENTS

AQUACULTURE AND THE ENVIRONMENT

1:30 Claude E. Boyd
ENERGY USE AND CARBON EMISSIONS IN AQUACULTURE

1:45 Lauren Jescovitch, Claude E. Boyd
WATER SURFACE:LAND AREA RATIO FOR AQUACULTURE PONDS

2:00 Larry L. Lawson, Jeffrey E. Hill, Scott Hardin
ASSESSMENT OF RISKS OF TRANSGENIC FLOURESCENT ORNAMENTAL FISHES TO THE UNITED STATES USING THE FISH INVASIVENESS SCORING KIT (FISK v2)

2:15 Hyun-Ki Hong, Hee-Jung Lee, Hee-Do Jeung, Hyun-Sil Kang, Heung-Sik Park, Ok Hwan Yu, Won Joon Shim, Kwang-Sik Choi
GROWTH AND REPRODUCTIVE CONDITION OF PACIFIC OYSTER *Crassostrea gigas* RAISED IN AN INTERTIDAL RACK-SUSPENDED CULTURE SYSTEM IN TAEAN OFF THE WEST COAST OF KOREA, 3 YEARS AFTER THE HEBEI SPRIRIT OIL SPILL

2:30 M. Golam Mortuza, Fahad A. Almisned
INDUSTRIAL EFFLUENT AND MINICIPAL DISCHARGE EFFECT ON THE FUNNAL DIVERSITY IN WADI HANIFAH: A CASE STUDY

2:45 Mehdi Moslemi-Aqdam, Javid Imanpour Namin, Masoud Sattari, Shahram Abdolmalaki, Ali Bani
SEX RATIO, GONADOSOMATIC AND HEPATOSOMATIC INDICES OF PIKE *Esco lucius* (LINNAEUS, 1798) IN ANZALI LAGOON (SOUTHWEST OF THE CASPIAN SEA)
GENERAL AQUACULTURE
Wednesday, February 12     1:30 - 5:00     Room 611
Chairs: Vaun Cummins, Keith Filer

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1:30  Keith Filer, Vaun Cummins  
FARMING THE SEA

1:45  Kurt A. Rosentrater  
TECHNO-ECONOMIC ANALYSIS OF HARVESTING, PROCESSING, AND TRANSPORTING OF SEAWEED

2:00  Ceres A. Molina-Cárdenas, M. del Pilar Sánchez-Saavedra, Alexei Licea-Navarro  
PROTOCOL TO DECREASE BACTERIAL CONTENT IN CULTURES OF Isochrysis galbana

2:15  Charles Malveaux, Steven Hall  
ENVIRONMENTAL CONTROL SYSTEM FOR Alligator mississippiensis RESEARCH FACILITY

2:30  Jose Sanchez  
ALGAE: A TRIPLE SOLUTION TO AQUACULTURE INDUSTRY CHALLENGES

3:00  BREAK

3:30  Michelle L. “Mick” Walsh, Elizabeth A. Fairchild  
OPTIMAL REARING STRATEGIES FOR WHITE WORMS Enchytraeus albidus: A LIVE FEED FOR JUVENILE AND SMALL-MOUTHED ORGANISMS

3:45  Larry L. Lawson, Jeffrey E. Hill, Scott Hardin, Lorenzo Vilizzi, Gordon Copp  
APPLICATION AND PERFORMANCE OF THE FISH INVASIVENESS SCORING KIT (FISK v2) TO IDENTIFY THE INVASIVENESS RISK OF NON-NATIVE FRESHWATER FISHES IN PENINSULAR FLORIDA

4:00  Julie Delabbio  
SUBMERSIBLE LED LIGHTING IN AQUACULTURE: THE ABILITY TO MANIPULATE LIGHT SPECTRUM, LIGHT INTENSITY AND PHOTOPERIOD IN ONE LIGHTING SYSTEM

4:15  Siyanbola Omitoyin, Olabisi Fawehinmi, A. B. Pomary  
GENDER PARTICIPATION IN AQUACULTURE IN LAGOS STATE NIGERIA

4:30  Siyanbola Omitoyin, Abiola Oyeleye  
PRODUCTION TECHNOLOGY AND DISTRIBUTION BOTTLENECKS OF CATFISH VALUE CHAIN IN OSUN STATE NIGERIA

4:45  Mohamed E. Megahed  
GROWTH TRIALS ON WILD, DOMESTICATED AND HYBRIDS OF INDIAN WHITE SHRIMP Fenneropenaeus indicus