



TUESDAY, June 27

PLENARY

Tuesday, June 27 9:00 - 10:30 Auditorium 2
Chair: Kevan Main

- 9:00** Welcome by **Dr. Juan Pablo Lazo**, WAS President
- 9:05** Welcome by **Honorable Senzeni Zokwana**, Minister DAFF
- 9:15** **WAS / AASA Awards**
Dr. Juan Pablo Lazo (WAS Awards); Dr. Pete Britz (AASA Awards)
- 9:30** **Dr. Rohana Subasinghe**, FAO
FEEDING THE NINE BILLION: THE ROLE OF AQUACULTURE
- 10:00** **Dr. Sloans Chimatiro**, WorldFish
THE IMPACT OF POLICY ON AQUACULTURE DEVELOPMENT IN AFRICA
- 10:30** **BREAK**

FINFISH HATCHERY AND NURSERY

Tuesday, June 27 11:30 - 13:10 Meeting Room 2.41

Chair: Nick James

TUESDAY

- 11:30 Elizabeth Mwikali Nyanchiri**, Phillip Raburu
EFFECT OF STOCKING DENSITY AND DIETARY PROTEIN ON GROWTH AND SPAWNING PERFORMANCE OF SINGIDIA TILAPIA *Oreochromis esculentus* BROODFISH, KENYA
- 11:50 M.K. Anil**, V.V. Sugi, P. Gomathi, P.K. Raheem, B. Santhosh, B. Raju, G. Gopakumar, K.K. Philipose, A. Gopalakrishnan
SUCCESSFUL BROODSTOCK DEVELOPMENT AND BREEDING OF PINK EAR EMPEROR *Lethrinus lentjan* IN RECIRCULATION AQUACULTURE SYSTEM
- 12:10 Thomas O. Keet**, Horst Kaiser, Neil A. Stallard
LARVAL-REARING TECHNIQUES FOR DUSKY KOB *Argyrosomus japonicus* WITH A SPECIFIC FOCUS ON A NOVEL FEEDING REGIME
- 12:30 Thumronk Amornsakun**, Anuar bin Hassan, Tan Min Pau, Vuong Hung Vo, Nirattisai Petchsupa
EFFECTS OF WATER SALINITY ON HATCHING OF EGG, GROWTH AND SURVIVAL OF LARVAE AND FINGERLING OF SNAKE HEAD FISH *Channa striatus*
- 12:50 Cassius Aruho**, Matthew Tenywa Mwanja, Fred Bugenyi, Justus Rutaisire
USE OF PITUITARY EXTRACTS, GNRHA + METACHRORIDE (DAGIN) AND WATER FOR OPTIMISING EGG PRODUCTION, FERTILISATION AND HATCHABILITY OF LARVAE IN INDUCED SPAWNING OF FIRST GENERATION OF *Barbus altianalis* RAISED IN CAPTIVITY
- 13:10 Nicole R. Rhody**, Matthew Resley, Rebecca Medvecky, Michael Kennedy, Kevan Main, Dana Wetzel
EFFECT OF CRUDE OIL EXPOSURE ON MATURATION AND SPAWNING IN CAPTIVE FLORIDA POMPAÑO *Trachinotus carolinus* BROODSTOCK

CLIMATE CHANGE

Tuesday, June 27 11:30 - 15:00 Meeting Room 1.44

Chair: Mosunmola Lydia Adeleke

- 11:30 Mosunmola Lydia Adeleke**, Diaa Al-Kenawy, Ahmed M. Nasr-Allah, Seamus Murphy, Garmal O. El-Naggar, Malcolm Dickson
PERCEPTION OF FISH FARMERS ON CLIMATE CHANGE IN AFRICA: THE CASE OF NIGERIA AND EGYPT
- 11:50 Siyanbola Omitoyin**, Adeola Oladeji
VULNERABILITY, RISK MANAGEMENT AND COPING STRATEGIES OF CLIMATE VARIABILITY AMONG THE FISH FARMERS IN ABUJA AREA COUNCILS
- 12:10 Phoebe Stewart-Sinclair**, Tom Wilding, Kim Last
VULNERABILITY TO CLIMATE CHANGE: EXPOSURE, SENSITIVITY AND ADAPTIVE CAPACITY OF MOLLUSCAN SHELLFISH AQUACULTURE
- 12:30 Diego Esteban Platas-Rosado**, Luis González-Reynoso
PROSPECTIVE FOR AQUACULTURE IN THE FACE OF GLOBAL CLIMATE CHANGE IN VERACRUZ, MEXICO

13:10 LUNCH

- 12:50 Christina Hoerterer**, Maximilian F. Schupp, Andreas Benkens, Bela H. Buck
HOW STAKEHOLDER PERCEPTIONS CAN INSPIRE CLIMATE CHANGE ADAPTATION STRATEGIES FOR SEA FOOD INDUSTRIES
- 14:30 Ben van Zyl**, J. Barend, Cassandra DeYoung
ENHANCING CLIMATE CHANGE RESILIENCE IN THE BENGUELA CURRENT FISHERIES SYSTEM
- 14:50 Peng Xu, Jian Xu**, Jiongtang Li, Yanliang Jiang, Wenzhu Peng
THE GENOME OF AMUR IDE *Leuciscus waleckii* PROVIDES INSIGHT INTO ADAPTIVE EVOLUTION IN RESPONSE TO EXTREME ALKALINITY
- 15:10 Renalda Munubi**, Peter McIntyre, Yvonne Vadeboncoeur
THE EFFECTS OF ALGAL FOOD QUALITY ON BEHAVIORAL AND MORPHOLOGICAL GUT STRUCTURE OF ORNAMENTAL FISH *Tropheus brichardi* IN LAKE TANGANYIKA

PROBIOTICS / PREBIOTICS

Tuesday, June 27 11:30 - 13:10 Meeting Room 1.43

Chair: Brett Macey

- 11:30 Rayaprolu Srinivas**
EFFECT OF PROBIOTICS ON VIBRIO BACTERIAL POPULATION OF *Litopenaeus vannamei* IN CULTURE PONDS AT VADACHEEPURUPALLI, ANDHRA PRADESH, INDIA
- 11:50 P.X. Phiri**, H.Y. Chenia, M.S. Thaela-Chimuka
ANTIMICROBIAL AND ANTI-BIOFILM POTENTIAL OF SEAWEED-ASSOCIATED BACTERIA ISOLATED FROM SOUTH AFRICAN SEAWEED AGAINST RESISTANT AQUACULTURE PATHOGENS

MARINE AND FRESHWATER ORNAMENTALS

Tuesday, June 27 11:30 - 15:30 Meeting Room 1.61

Chairs: Andrew Rossiter, Anna Mercy

- 11:30 Okechukwu Alum-Udensi**, Anthony A Nlewadim
IMPORTANT EXOTIC ORNAMENTAL FISH SPECIES IN NIGERIA
- 11:50 Anna Mercy**, Seena Augustine
MORPHOLOGY OF THE ALIMENTARY CANAL AND FEEDING INTENSITY OF *Horadandia atukorali* (DERANIYAGALA, 1943) (CYPRINIDAE), AN INDIGENOUS ORNAMENTAL BARB OF THE WESTERN GHATS OF INDIA

- 12:10 Kaippilly Dinesh**, S. Shyama, P.B. Akhil, M.T. Geeji, S.S. Cubelio, Anna Mercy
FEASIBILITY OF USING INDOOR-PAIRING CAGES FOR DEVELOPING COMPATIBILITY AMONG THE ORNAMENTAL MARINE DECAPOD *Lysmata debelius*
- 12:30 Anna Mercy**
BIODIVERSITY OF INDIGENOUS ORNAMENTAL FISHES OF THE WESTERN GHATS OF INDIA – STATUS AND PROSPECTS
- 12:50 M.K. Anil**, P. Gomathi, P.K. Raheem, B. Raju, K.K. Philipose, A. Gopalakrishnan
SUCCESSFUL CAPTIVE BROODSTOCK DEVELOPMENT AND BREEDING OF SERRANID SEA-GOLDIE *Pseudanthias squamipinnis* USING RECIRCULATION AQUACULTURE SYSTEM
- 13:10 LUNCH**
- 14:30 Atul Kumar Jain**, T.V. Anna Mercy
THE DOMESTIC AQUARIUM TRADE IN INDIA IS SHIFTING FROM A SUPPLY DRIVEN TRADE TO A DEMAND DRIVEN TRADE
- 14:50 B.D. Olaosebikan**, Tobias Musschoots
ASSESSING CONSERVATION PRIORITIES FOR THREATENED ORNAMENTAL FISHES OF NIGERIA

AQUAPONICS

Tuesday, June 27 11:30 - 15:30 Meeting Room 2.44

Chairs: Richard Taylor, Neill Goosen

- 11:30 Richard Taylor**, Clifford Jones
THE INTERGRATION OF AQUAPONICS INTO A BREWERY EFFLUENT TREATMENT SYSTEM
- 11:50 Ibrahim E.H. Belal**, Jean-Yves Mevel, Radhakrishnan Subramanian
ARID LAND AQUAPONIC SYSTEM OF TILAPIA *Oreochromis spilurus* AND QUINOA *Chenopodium quinoa* UNDER TWO DIFFERENT SALINITIES: PRODUCTION CHARACTERISTICS, IN INPUT AND OUTPUT
- 12:10 Clifford L.W. Jones**, Richard Taylor, Richard Laubscher, Mmathabo Mogane, Sean Power
INTEGRATION OF AQUACULTURE INTO AN INDUSTRIAL EFFLUENT TREATMENT SYSTEM AND THE RECOVERY AND REUSE OF WATER AND NUTRIENTS
- 12:30 Karabo Mashabela**, Rirhandzu Marivate, Minnelise Levendal
CHALLENGES FACING A RURAL ENTREPRENEURIAL FARMER IN PLANNING AND DEVELOPING AN AQUAPONICS FACILITY IN SOUTH AFRICA: A CASE STUDY FROM THE EASTERN CAPE
- 12:50 Stephen N. Njane**, Naoshi Kondo, Yuichi Ogawa, Tetsuhito Suzuki, Habaragamuwa Harshana
UNDERWATER FISH VOLUME ESTIMATION USING AN OPEN CAVITY HELMHOLTZ RESONATOR
- 13:10 LUNCH**

- 14:30 Eugene Moore**, James Ward, Wilson Lennard, Christopher Saint
GREENHOUSE BASIL AND KALE PRODUCTION USING RAS EFFLUENT AND SOLIDS IN SOUTHERN AUSTRALIA
- 14:50 Oyama Siqwepu**, Neill Goosen, Khalid Salie
OPTIMIZATION OF NUTRIENT INPUT TO INTEGRATED AQUAPONICS SYSTEMS THROUGH MINERAL SUPPLEMENTATION BY WAY OF FISH FEED ADDITIVES
- 15:10 Khumbudzo Manyaga**
RESPONDING TO THE CHALLENGE OF DEVELOPING SUSTAINABLE FOOD SOURCES THROUGH AQUAPONICS

CATFISH

Tuesday, June 27 11:30 - 15:30 Meeting Room 2.61

Chair: Bart Green

- 11:30 Joseph R. Sullivan**
SOME COMMON THEMES FOR USAID FARMER-TO-FARMER SMALL SCALE AQUACULTURE ASSISTANCE IN SUB-SAHARAN AFRICA: SHARP TOOTH CATFISH FINGERLING PRODUCTION
- 11:50 Bartholomew W. Green**, Kevin K. Schrader, Peter W. Perschbacher
CHANNEL CATFISH PRODUCTION IN A BIOFLOC TECHNOLOGY SYSTEM
- 12:10 Joachim Kuzimbila Yongo**
RAPID AND ASSISTED MULTIPLICATION TECHNIQUE OF AFRICAN CATFISH *Clarias gariepinus*
- 12:30 Akwasi Ampofo-Yeboah**, Francis Adjei, Kwaku Amoah
COMPARATIVE STUDY ON THE HATCHABILITY AND SURVIVAL RATES OF CROSSES BETWEEN WILD AND FARMED CATFISH *Clarias gariepinus* (BURCHELL, 1822) LARVAL PRODUCTION USING CATFISH PITUITARY EXTRACT HORMONE
- 12:50 Afamdi Anene**, Goodness C. Johnson
ASSESSMENT OF THE GROWTH PERFORMANCE AND PROXIMATE QUALITY OF FINGERLING OF *Clarias gariepinus* (BURCHELL, 1822) FED DIETS CONTAINING VARYING LEVELS OF ONION POWDER *Allium cepa* AS A PHYTO-ADDITIVE
- 13:10 LUNCH**
- 14:30 Lawrence Nwanna**, Elizabeth Ogundowole
ACUTE TOXICITY OF NPK 15:15:15 FERTILIZER TO AFRICAN CATFISH AND THE EFFECT ON BLOOD, LIVER ENZYMES AND HISTOLOGY OF THE GILLS AND LIVER
- 14:50 Alpine Mboga**, Maroko Mokaya, Angela Cheruto, Samson Tsuma
IMPROVED TECHNIQUE FOR HARVESTING MAGGOTS, USED AS START-UP DIET FOR *Clarias gariepinus* FRY
- 15:10 Abigail H. John**
EFFECT OF GARLIC *Allium sativum* ON GROWTH AND IMMUNE SYSTEM OF *Clarias gariepinus*

SMALL-SCALE AQUACULTURE AND LIVELIHOODS

Tuesday, June 27 11:30 - 13:10 Meeting Room 2.64

Chair: Ram Bhujel

- 11:30 Veena Soni**
THE ROLE OF AQUACULTURE IN RURAL DEVELOPMENT
- 11:50 Wagner C. Valenti**, Barry A. Costa-Pierce, Wagner C. Valenti
INDIGENOUS FISH AQUACULTURE AS A MEANS FOR THE SUSTAINABLE DEVELOPMENT OF RURAL COMMUNITIES REMAINING IN NATURE RESERVES OF BRAZIL
- 12:10 Ashley Patience**, Caitlin Firth, Anneleen Swanepoel, Khalid Salie
STATUS OF SMALL-SCALE FISH FARMING IN THE THULAMELA MUNICIPALITY, LIMPOPO PROVINCE, SOUTH AFRICA
- 12:30 Alison Simmance**, Nyovani Madise, Guy Poppy, Jeppe Kolding
THE COMPLEX ROLE OF SMALL SCALE AQUACULTURE TO FOOD SECURITY: THE CASE OF MALAWI
- 12:50 Jacky Phosa**, Rirhandzu Mkhari, Morris Maja, Mudi Ligege
IS RURAL SMALL SCALE AQUACULTURE REALISED IN LIMPOPO PROVINCE, SOUTH AFRICA?

TILAPIA AQUAFEED

Tuesday, June 27 11:30 - 17:30 Ballroom West

Chair: Hanno Slawski



- 11:30 Hanno Slawski**
FORMULATING TILAPIA FEEDS FOR THE AFRICAN CONTINENT
- 12:10 Gauthier D.P. Konnert**, Johan W. Schrama, Karthik Masagounder
FORMULATING TILAPIA DIETS ON DIGESTIBLE BASIS: A REVIEW OF PUBLISHED APPARENT DIGESTIBILITY COEFFICIENTS
- 12:30 Karthik Masagounder**, Cláudia Figueiredo-Silva
PROGRESS IN THE AMINOACID NUTRITION OF NILE TILAPIA
- 12:50 Juyun He**, Lixia Tian, Andreas Lemme, Claudia Figueiredo-Silva, Yongjian Liu
THE EFFECT OF DIETARY METHIONINE CONCENTRATIONS ON GROWTH PERFORMANCE OF JUVENILE NILE TILAPIA *Oreochromis niloticus* FED DIETS WITH TWO DIFFERENT DIGESTIBLE ENERGY LEVELS
- 13:10 LUNCH**
- 14:30 Débora Machado Fracalossi**, Renata Oselame Nobrega, Camila Fernandes Corrêa, Bruna Mattioni, Maria Fernanda Oliveira da Silva
REQUIREMENT OF DIETARY α -LINOLENIC FATTY ACID FOR JUVENILE NILE TILAPIA AT COLD SUBOPTIMAL TEMPERATURE

- 14:50 Margaret Aanyu**, Mónica B. Bentacor, Oscar Monroig
EFFECTS OF COMBINED PHYTOGENIC COMPOUNDS ON GROWTH AND NUTRITIONAL PHYSIOLOGY OF NILE TILAPIA *Oreochromis niloticus*
- 15:10 Dušan Palić**, Phichanont Chiyansuvata, Nantarika Chansue, Nitiwadee Keschumras, Ahmed El Sebaey, Eman Zahran El Naggat, Marko Vasiljević
EFFECTS OF MODIFIED ZEOLITE (CLINOPTILOLITE) USED AS FEED ADDITIVE ON PRODUCTION PARAMETERS IN SHRIMP AND FISH AQUACULTURE
- 15:30 Mohammed Oumer**
EVALUATION OF FORMULATED FEED OF PLANT AND ANIMAL ORIGIN ON THE GROWTH PERFORMANCE OF *Oreochromis niloticus* IN PONDS, ETHIOPIA
- 15:50 Nathaniel G. Adjei**, Emmanuel A. Frimpong, Regina Edziyie
GROWTH AND FEED CONVERSION OF NILE TILAPIA *Oreochromis niloticus* IN PONDS WITH COMMERCIAL GROW-OUT FEEDS OF VARYING PROTEIN CONTENT

VETERINARY CAPACITY DRUGS, CHEMOTHERAPY, DISEASE

Tuesday, June 27 11:30 - 17:30 Roof Terrace Room

Chairs: John Walakira, Stephanie Steeves, Horst Kaiser



MSD

Animal Health

DRUGS AND CHEMOTHERAPEUTICS

- 11:30 Gilad Yamin**, Jaap van Rijn
THE PROTECTIVE EFFECT OF HUMIC SUBSTANCES AGAINST FISH PATHOGENS

BIOSECURITY

- 11:50 Angel D. Maapea**, Anna M. Clarke, Brett Macey, Niall G. Vane
DEVELOPMENT OF AN EGG DISINFECTION PROTOCOL FOR SOUTH AFRICAN MARINE AQUACULTURE FINFISH SPECIES
- 12:10 Stephen D. Eddy**, Johannes Nicolas Falke, William Kelleher, Kit Munday
IMPORT, QUARANTINE, AND DISEASE TESTING OF THE AFRICAN LONGFIN EEL *Anguilla mossambica* IN MAINE, USA
- 12:30 Jeremiah J. Minich**, Qiyun Zhu, Ryan Hendrickson, James Bernardini, Amnon Amir, Kristina Stillwell, Megan Doty, John Hyde, Russ Vetter, Jae Kim, Kasthuri Venkateswaran, Rob Knight
CleanSeq ENABLES HIGH-THROUGHPUT MICROBIOME ANALYSIS FROM LOW BIOMASS SAMPLES AND IS APPLIED TO IDENTIFY SPATIAL DISTRIBUTION OF MICROBES FROM THREE CLEANROOMS
- 13:10 LUNCH**
- 14:30 Gianluigi Negroni**, Federico Rivalta
FISH FARM WATER TREATMENT: NEW MULTI-APPROACH FOR APPLICATION OF SODIUM FERRATE
- 14:50 Sam MacDonald**, Brendan Cook, John Wintermeyer
ENFORCING AQUACULTURE REGULATIONS UTILITIZING UNDERWATER DRONES (ROVs)

DISEASES

- 15:10 Nelly Isyasi**
AN AFRICAN CONTINENTAL OVERVIEW FOR AQUATIC ANIMAL DISEASE CONTROL
- 15:30 Stéphane Frouel**, Clarisse Techer, Frederic Jozwiak
A NATURAL GUT ENHANCER TO IMPROVE RESISTANCE OF AQUATIC FARMED SPECIES AGAINST PATHOGENIC PRESSURE
- 15:50 Wilson Jere**, Hopeful Kanthenga, Benson Lusangasi, Charles Makuya, Trithy Sausa, Wales Singini
USING *Trematocranus placodon* AS A BIOLOGICAL CONTROL AGENT OF SCHISTOSOMIASIS SNAIL HOSTS
- 16:10 Chai Foong** Lai, Ting-Yu Wang, Tzong-Yueh Chen
THE IMPACT OF TEMPERATURE ON THE REGULATION OF INTERFERON REGULATORY FACTOR 4 (IRF-4) IN NERVOUS NECROSIS VIRUS-INFECTED ORANGE-SPOTTED GROUPER *Epinephelus coioides*
- 16:30 Dong Zhang**, Tingting Lin
VARIATIONS OF IMMUNE PARAMETERS IN THE LINED SEAHORSE *Hippocampus erectus* AFTER INFECTION WITH ENTERITIS PATHOGEN OF *Vibrio parahaemolyticus*
- 16:50 Elisa Mwega**, Huruma Tuntufye, Duncan Colquhoun, Stephen Mutoloki, Robinson Mdegela, Øystein Evensen, Yngvild Wasteson
ISOLATION AND CHARACTERIZATION OF FLAVOBACTERIACEAE FROM FARMED AND WILD NILE TILAPIA IN TANZANIA

ABALONE

Tuesday, June 27 11:30 - 17:30 Meeting Room 1.41

Chairs: Weiwei You, Peter Britz

- 11:30 Weiwei You**, Xuan Luo, Caihuan Ke
HETEROSIS AND HYBRIDIZATION ON HALIOTIS: EXPERIMENTAL EVIDENCE AND ITS APPLICATION ON CHINESE ABALONE INDUSTRY
- 11:50 Charles J. Foord**, Vernon E. Coyne, Grant C. Pitcher, Brett M. Macey
ACCUMULATION OF PARALYTIC SHELLFISH POISONING TOXIN IN THE ABALONE *Haliotis midae* AND POTENTIAL VECTORS
- 12:10 Jong-Myoung Kim**, Mi-Jin Choi, Kyung Myo Kang, Han Kyu Lim
INVESTIGATION OF GENE EXPRESSION PATTERN OF ZONA PELLUCIDA DOMAIN 4 (ZP4) IN PACIFIC ABALONE *Haliotis discus hannai* AND ITS EXPRESSION IN EARLY STAGE OF THE GONAD DIFFERENTIATION
- 12:30 Warren Witte**, Peter Britz
ABALONE STOCK ENHANCEMENT AT CAPE RECIFE, EASTERN CAPE PROVINCE OF SOUTH AFRICA
- 13:10 LUNCH**

- 14:30 Chris Gornall**, Clifford Jones, Horst Kaiser
ABALONE *Haliotis midae* BEHAVIOUR AND STOCKING DENSITY: IS BEHAVIOUR INFLUENCED BY DENSITY?
- 14:50 Stephen J. Dünser**, Horst Kaiser, Cliff L.W. Jones, Matt A. Naylor
THE EFFECT OF STOCKING DENSITY ON THE BEHAVIOUR OF CULTURED SOUTH AFRICAN ABALONE *Haliotis midae*
- 15:10 Matthew S. Bansemmer**, Jian G. Qin, James O. Harris, Duong N. Duong, Krishna-Lee Currie, Gordon S. Howarth, David A.J. Stone
DIETARY INCLUSIONS OF DRIED MACROALGAE MEAL IN FORMULATED DIETS IMPROVE THE GROWTH OF GREENLIP ABALONE *Haliotis laevigata*
- 15:30 Krishna-Lee Currie**, Mark Purvis, Amy Bates, James O. Harris, David A.J. Stone
DIETARY INCLUSIONS OF ACTI-MEAL IMPROVES THE GROWTH AND FEED UTILISATION OF GREENLIP ABALONE *Haliotis laevigata*
- 15:50 Ann Wu**, Devin W.P. Ayres, Nicholas A. Riddin, Matthew A. Naylor, Clifford L.W. Jones, Horst Kaiser
THE EFFECT OF SOYA AND CRYSTALLINE ISOFLAVONES ON THE GROWTH AND REPRODUCTIVE DEVELOPMENT OF FARMED ABALONE *Haliotis midae*
- 16:10 Kyle Lloyd**, Clifford Jones, Thomas Shipton
TOWARDS DETERMINING THE DIETARY LYSINE REQUIREMENT IN THE SOUTH AFRICAN ABALONE *Haliotis midae*
- 16:30 Neill J. Goosen**, Lourens F. de Wet, Johann F. Görgens
THE USE OF DIETARY INGREDIENTS DERIVED FROM FISH PROCESSING BY-PRODUCTS IN ABALONE DIETS, WITH AND WITHOUT FORMIC ACID SUPPLEMENTATION
- 16:50 Aldi Nel**, Brett I. Pletschke, Clifford L.W. Jones, Justin O.G. Kemp, Georgina Robinson, Peter J. Britz
THE EFFECT OF KELP *Ecklonia maxima* INCLUSION IN FORMULATED FEED ON GROWTH, FEED UTILISATION AND THE GUT MICROBIOTA OF SOUTH AFRICAN ABALONE *Haliotis midae*

EDUCATION, EXTENSION AND TECHNOLOGY TRANSFER

Tuesday, June 27 11:30 - 17:30 Meeting Room 1.63

Chairs: Clifford Jones, John Baliwra, Regina Edziyie

- 11:30 Siphon Deon Mafuyeka**, Deborah Vivienne Robertson-Andersson, Khalid Salie
AN ASSESSMENT OF KNOWLEDGE TRANSFER SYSTEMS TO FRESH WATER AQUACULTURE FARMERS IN KWAZULU-NATAL (KZN)
- 11:50 Swagat Ghosh**
PERIPHYTON BASED DIFFERENT APPROACHES IN FISHERIES MODULES: IMPLICATION OF SUSTAINABLE LIVELIHOOD SECURITY OF THE FARMERS IN RURAL SUNDERBAN OF INDIA
- 12:10 Ram C. Bhujel**
ROLE OF EDUCATION, RESEARCH AND TRAINING IN ASIAN AQUACULTURE DEVELOPMENT

- 12:30 Khalid Salie**, Wendy Engel
ROLE OF KNOWLEDGE EXCHANGE IN FRESHWATER AQUACULTURE
DEVELOPMENT AND WATER RESOURCE MANAGEMENT
- 12:50 Julius O. Manyala**, Charles Ngugi
POST-GRADUATE TEACHING AND CURRICULUM DEVELOPMENT IN
AQUACULTURE AND FISHERIES SCIENCE IN SUB-SAHARA AFRICA: DEMAND,
PRESENT OPPORTUNITIES AND FUTURE POTENTIAL
- 13:10 LUNCH**
- 14:30 Horst Kaiser**
TEACHING EXPERIMENTAL DESIGN, DATA ANALYSIS AND SCIENTIFIC WRITING
AS PART OF THE THIRD-YEAR ICHTHYOLOGY CURRICULUM AT RHODES
UNIVERSITY, SOUTH AFRICA
- 14:50 Patrick Sorgeloos**
THE 3 PILLARS OF UNIVERSITY COOPERATION: EDUCATION, RESEARCH AND
SERVICE TO SOCIETY
- 15:10 Anthony A. Nlewadim**
THE TRAINING APPROACHES IN AQUACULTURE: THE NIGERIAN EXPERIENCE
- 15:30 Austin Mtethiwa**, Daniel Sikawa
CHALLENGES ASSOCIATED WITH PhD SUPERVISION IN SUB-SAHARAN AFRICA
- 15:50 Robinson Odong**, Godfrey Kawooya Kubiriza, Peter Akoll, Charles Masembe
BOOSTING FISHERIES AND AQUACULTURE PRODUCTION IN AFRICA THROUGH
STRATEGIC AND SYNERGISTIC PARTNERSHIPS AND ADVANCEMENT OF INTER/
MULTI-DISCIPLINARY TRAINING
- 16:10 Satoshi Chikami**
EXTENSION OF SMALL-SCALE TILAPIA FARMING IN MADAGASCAR
- 16:30 David Cline**
CREATING BETTER EDUCATIONAL VIDEOS FOR EXTENSION AND OUTREACH
- 16:50 Maryke Musson**, Larry Oellermann
AQUACULTURE AND AQUARIA – THE SYNERGIES, SYMBIOSIS AND SUCCESSES

FINANCING AFRICAN AQUACULTURE

Tuesday, June 27 14:30 - 17:30 Auditorium 2

Chair: Randy Brummet

- 14:30 Randall Brummett**
SPECIAL SESSION ON FINANCING AFRICAN AQUACULTURE
- 14:50 Felix Martin**
MODELS FOR INCLUSIVE AQUACULTURE DEVELOPMENT IN AFRICA
- 15:10 Bryan McCoy**, Adam Taylor
OPPORTUNITIES, CHALLENGES AND REALITIES IN AFRICAN COMMERCIAL
AQUACULTURE
- 15:30 Patrick Seruyange**
AQUACULTURE PARKS: IMPROVING HUMAN WELFARE WITH ENVIRONMENTALLY
SUSTAINABLE MARKET-ORIENTED AQUACULTURE
- 15:50 Andre Bok**
A CASE STUDY OF INVESTOR IGNORANCE IN THE RISE AND FALL (AND RISE?)
OF THE SOUTH AFRICAN MARINE FISH FARMING INDUSTRY
- 16:10 Amy Novogratz**, Mike Velings
AQUA-SPARK: INVESTING IN THE FUTURE OF AQUACULTURE
- 16:30 Lionel Brenner**
THE FINANCING GAP FOR SOUTH AFRICAN AQUACULTURE
- 16:50 Gavin Johnston**, Willem Schoonbee
20-20 VISION, LESSONS FROM A FAILED OFFSHORE FISH PROJECT IN
MOZAMBIQUE AND HOW THESE MAY BENEFIT THE EMERGING TILAPIA
INDUSTRY IN EAST AFRICA
- 17:10 Lisa Geswindt**, Brian Soldaat
AQUACULTURE INVESTMENT OPPORTUNITIES AND INCENTIVES IN SOUTH
AFRICA

WAS AFRICAN CHAPTER FORMATION MEETING

Tuesday, June 27 17:30 – 18:30 Auditorium 2

Join representatives of WAS Board and interested attendees from throughout Africa to discuss the details of forming and maintaining an active viable Chapter for WAS in Africa.

You can use your Happy Hour Drink Coupon at the meeting

STOCK ENHANCEMENT

Tuesday, June 27 14:30 - 17:30 Meeting Room 2.41

Chairs: Kevan Main, Ken Leber

TUESDAY

- 14:30 Jon P. Altamirano**, Nerissa D. Salayo, Hisashi Kurokura, Hiroshi Fushimi, Satoshi Ishikawa
STOCK ENHANCEMENT OF SHRIMPS IN THE PHILIPPINES AND ITS IMPACT ON FISHERIES AND THE COMMUNITY
- 14:50 Stanislaus Sonnenholzner**, Adrian Marquez, Jormil Revilla, Daniel Rodríguez, César Lodeiros
RESTORING THE MARINE RESERVE EL PELADO (ECUADOR) WITH *Spondylus limbatus*: STOCKING SUCCESS OF HATCHERY PRODUCED JUVENILES
- 15:10 H. Lee Blankenship**, Ken Leber, Nate Brennan
MAXIMIZING STOCK ENHANCEMENT EFFECTIVENESS: IMPORTANCE OF TAGGING AND MONITORING
- 15:30 Kenneth M. Leber**, Ryan Schloesser, Nathan P. Brennan, Kevan L. Main, Charles H. Peterson
HATCHERY-REARED JUVENILE SNOOK AS ECOLOGICAL PROBES FOR HABITAT QUALITY IN SOUTHWEST FLORIDA
- 15:50 Kevan Main**, Matthew Resley, Nicole Rhody, Carlos Yanes-Roca, Nathan Brennan, Ronald Hans, Carole L. Neidig, Kenneth Leber
IMPROVEMENTS IN COMMON SNOOK *Centropomus undecimalis* LARVAL AND FINGERLING PRODUCTION PROTOCOLS FOR STOCK ENHANCEMENT
- 16:10 Dismas Mbabazi**, Herbert Nakiyende, Anthony Taabu-Munyaho, Edward Rukuunya, Jackson Efitre, Theodora Hyuha, Mujib Nkambo, Papius Tibihikwa, Julius Twinamatsiko, Samuel Bassa, Elias Muhumuza, Joshua Tazibirwa, Angela Nankabirwa, Veronica Mpomwenda, Jennifer Twebaze, Denis Bilungi, John S. Balirwa
SOCIO-ECOLOGICAL SUITABILITY FOR FISH PRODUCTION IN SMALL WATER BODIES IN SOUTH WESTERN UGANDA, EAST AFRICA

GIS / SPATIAL PLANNING

Tuesday, June 27 14:30 - 17:30 Meeting Room 1.43

Chair: Lisande Kellerman

- 14:30 Luanita Snyman-Van der Walt**, Lizande Kellerman, Pat Morant, Karabo Mashabela, Paul Lochner
NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR AQUACULTURE DEVELOPMENT IN SOUTH AFRICA – GIS ANALYSIS FOR IDENTIFYING OPTIMAL AREAS FOR MARINE AND FRESHWATER AQUACULTURE DEVELOPMENT
- 14:50 Andrew D. Witte**, Paul-Pierre Steyn, Derek R. Du Preez, Peter Britz
MULTI-CRITERIA FUZZY DECISION SUPPORT SYSTEM (MCFDSS) FOR ABALONE RANCHING PLOT SELECTION

ENVIRONMENT

Tuesday, June 27 15:00 - 17:30 Meeting Room 1.44

Chairs: Grant Pitcher, Jan-Willem van Bochove

- 15:50 Madhumita Mukherjee**
EFFECTS OF ANTHROPOGENIC POLLUTION WITH SPECIAL REFERENCE TO HEAVY METAL ACCUMULATION IN BIVALVE MOLLUSKS *Saccostrea cucullata* IN SUNDERBAN WETLANDS OF WEST BENGAL, INDIA
- 16:10 Terngu Akaahan**
STRUCTURAL DAMAGE IN THE KIDNEY AND LIVER OF *Clarias gariepinus* JUVENILES EXPOSED TO GRADED CONCENTRATION OF ZINC
- 16:30 Amita Saxena**, Manish Kumar
HEAVY METALS (Cu AND Pb) REPORTED IN THE FISH TISSUES FROM KOSI, A RIVER OF UTTRAKHAND INDIA
- 16:50 Abdoul-Ibrachi Gouda**, Bruno Schiffers, Ibrahim Imorou Toko, Marie-Louis Scippo, Patrick Kestemont
QUANTIFICATION DE LA DÉRIVE GÉNÉRÉE PAR L'UTILISATION DES DEUX TYPES DE PULVÉRISATEURS LORS DES TRAITEMENTS PHYTOSANITAIRES SUR LE COTONNIER
- 17:10 Abdoul-Ibrachi Gouda**, Bruno Schiffers
ANALYSE PAR LA METHODE DPSIR DES RISQUES SANITAIRES ET ENVIRONNEMENTAUX LIES AUX PRATIQUES PHYTOSANITAIRES EN CULTURE COTONNIERE AU BENIN

DUTCH AQUACULTURE SESSION

Tuesday, June 27 15:00 - 17:30 Registration Foyer

Chair: Andries Kamstra

DUTCH AQUACULTURE EXPERTISE IN AFRICA, WHAT'S IN IT FOR YOU?

Andries Kamstra (DAE)

DUTCH AQUACULTURE EXPERTS; WHO WE ARE AND WHAT WE DO

Jurre Zaal & Kenny van Lith (Skretting)

SKRETTING – WE FEED MILLIONS

Eric Bink (Til-Aqua)

TILAPIA INDUSTRY HORMONE-FREE? YY-TECHNOLOGY!

Cees-Jan van der Leek (Coppens International)

SUSTAINABLE NUTRITION

Bert-Jan Roosendaal (Fleuren & Nooijen)

30 YEARS OF EXPERIENCE IN AFRICAN AQUACULTURE

Joe Maye (Lattice)

FINANCING THE GROWTH OF AQUACULTURE IN AFRICA

Frans Aartsen (Holland Aqua)

AquaHub DEVELOPMENT

Jason Hammond (Fresh Fish Ltd)

RAS IN PRACTICE IN EAST AFRICA

Wouter van Vliet (Larive)

FOSTERING A BLUE REVOLUTION IN EAST AFRICA (CASE STUDY)

Geert Custers (Catvis)

Catvis BV, AN INTRODUCTION OF EQUIPMENT FOR MODERN AQUACULTURE

LIVE FEEDS

Tuesday, June 27 15:30 - 17:30 Meeting Room 1.61

Chairs: Niall Vine, Benni Hansen

- 15:30 Benni Winding Hansen**, Birgitte Nilsson, Emil Boesen, Ole B. Brodnicke, Natasja L. Corfixen, Per M. Meyer Jepsen, Stephanie M. Larsen, Casper D. Læssøe, Pernille Munch, Peder K.F. Nielsen, Jørgen Olesen, Bent Vismann
REARING THE CALANOID *Acartia tonsa* Dana AND THE HARPACTICOID *Tispe holothuriae* L. IN MIXED CULTURES AS LIVE FEED FOR FISH LARVAE – DO THEY POSE COMPETITIVE EXCLUSION OR CO-EXIST?
- 15:50 Morine Mukami Ngarari**, Betty Mindraa Nyonje
STATUS OF *Artemia franciscana* PRODUCTION IN KENYAN COASTAL SALTWORKS
- 16:10 Van Bao Duy Le**, Ngoc Phuoc Nguyen, Kristof Dierckens, Dung V. Nguyen, Peter De Schryver, Atsushi Hagiwara, Peter Bossier
GROWTH PERFORMANCE OF THE VERY SMALL ROTIFER *Proales similis* IS MORE DEPENDENT ON LIVE LACTIC ACID BACTERIA AND BACILLUS SUBTILIS THAN THE BIGGER ROTIFER *Brachionus rotundiformis*
- 16:30 Ziyanda Mzozo**, Gwynneth Matcher, Niall G. Vine
FEEDING PREFERENCES OF THE CALANOID COPEPOD *Pseudodiaptomus hessei* UNDER CULTURE CONDITIONS

DEVELOPMENT, WELFARE AND POVERTY ALLEVIATION

Tuesday, June 27 15:30 - 17:30 Meeting Room 2.64

Chairs: Ferdi Endeman, Brian Nerrie

- 15:30 Jay Dev Bista**, Akbal Hussain, Ram Kumar Shrestha
COMMUNITY BASED LAKE RESOURCES MANAGEMENT: A SUCCESSFUL MODEL IN LAKES OF POKHARA VALLEY, NEPAL
- 15:50 Karen L. Veverica**, Charles Ngugi
MOVING SUBSISTENCE FARMERS TO COMMERCIAL FISH FARMING: DOES THIS EVEN MAKE SENSE?
- 16:10 Sven Genschick**, Gelson Tembo, Pamela Marinda
FISH CONSUMPTION IN URBAN LUSAKA: AQUACULTURE YET TO SUPPLY THE POOR
- 16:30 L. Katrina ole-MoiYoi**
CAN FISH FARMING TRANSFORM FOOD SECURITY IN RURAL KENYA?
- 16:50 Mafaniso Hara**, Gugu Njokweni, Belemane Semoli
COMMUNITY OPPORTUNITIES IN AQUACULTURE: POSSIBILITIES AND CHALLENGES
- 17:10 Eshete Dresilign**, Athifa Ali, Ana Menezes
DIVERSIFICATION OF THE AGRICULTURAL BASE FOR EMPLOYMENT CREATION FOR YOUNG PEOPLE IN SSA: THE CASE OF AQUACULTURE

ZEBRAFISH

Tuesday, June 27 16:30 - 17:30 Meeting Room 2.44

Chair: Tamer El-Sayed

- 16:30** **Nessrin Kheirallah**, Tamer El-Sayed Ali
NOVEL NON-ESTROGENIC ENDPOINTS OF PHENOLIC METABOLITES TOXICITY IN FISH: USING ZEBRAFISH AS A MODEL FOR STUDY
- 16:50** **Tamer El-Sayed Ali**
THE VALUE OF ZEBRAFISH *Danio rerio* AS AN INTEGRATIVE MODEL IN ECOTOXICOLOGY

TUESDAY

WEDNESDAY, June 28

PHYSIOLOGY, HISTOLOGY AND MORPHOLOGY

Wednesday, June 28 9:00 - 10:20 Meeting Room 1.41

Chairs: Julius Manyala, Andre Seale

- 9:00 Julius Manyala**, Tarus Victoria, Phillip Raburu, Joseph Rasowo
DEVELOPMENT OF DIGESTIVE ENZYMES AND UTILIZATION OF LOCAL FEED
INGREDIENTS FOR VICTORIA LABEO *Labeo victorianus* CULTURE
- 9:20 Andre P. Seale**, K. Keano Pavlosky, Benjamin P. Moorman, Yoko Yamaguchi,
Darren T. Lerner, E. Gordon Grau
HORMONAL CONTROL OF GROWTH AND OSMOREGULATION UNDER
DYNAMICALLY CHANGING SALINITIES IN MOZAMBIQUE TILAPIA *Oreochromis*
mossambicus

SEAWEED

Wednesday, June 28 9:00 - 13:00 Meeting Room 1.43

Chairs: Flower Msuya, Michael Stekoll

- 9:00 Mmathabo L. Mogane**, Clifford L.W. Jones, Richard K. Laubscher
NITROGEN AND PHOSPHORUS REMOVAL FROM BREWERY EFFLUENT USING
MICROALGAE
- 9:20 Kristin de Jager**, Brett Macey, John Bolton
MICRO-ORGANISMS ASSOCIATED WITH *Ulva* CULTIVATED IN AN INTEGRATED
AQUACULTURE SYSTEM WITH ABALONE, AND IMPLICATIONS FOR BIOSECURITY
- 9:40 Lineekela Kandjengo**
THE IDENTITY OF *Ulva* (ULVACEAE, ULVOPHYCEAE) SPECIES IN COMMERCIAL
AQUACULTURE IN THE SOUTH AFRICAN ABALONE INDUSTRY
- 10:00 Flower E. Msuya**
COPING WITH EFFECTS OF CLIMATE CHANGE – THE CASE OF SEAWEED
FARMERS IN ZANZIBAR, TANZANIA
- 10:20 Break**
- 11:00 Aziza H. Said**, Flower E. Msuya, Margaret S. Kyewalyanga, Aviti Mmochi,
Morten Sandvik, Jan L. Lyche
SKIN IRRITATION PROBLEM TO SEAWEED FARMERS IN TANZANIA COASTAL AREA
- 11:20 Michael S. Stekoll**, Tamsen Peeples, Ann Thomson
MARICULTURE OF KELPS IN SOUTHEAST ALASKA
- 11:40 Simona Augyte**, Charles Yarish, Sarah Redmond
FARMING *Saccharina angustissima*, A UNIQUE KELP IN THE GULF OF MAINE, USA,
WITH A FOCUS ON PRODUCTION AND ECOSYSTEM SERVICES
- 12:00 Pandora Wadsworth**, William Walton
DEVELOPMENT OF SEAWEED AQUACULTURE IN THE NORTHERN GULF OF MEXICO

WEDNESDAY

BUILDING AQUACULTURE VALUE CHAINS IN AFRICA

Wednesday, June 28 9:00 - 13:00 Auditorium 2

Chair: Kwamena Quagraine

Aller Aqua logo

- 9:00 Tom Hecht**
KEY DIFFERENTIATORS FOR ENTRY INTO THE AQUACULTURE VALUE CHAIN IN SUB-SAHARAN AFRICA
- 9:40 Niels Lundgaard, Leon Günter**
AN EXPERIENCE PAPER: ALLER AQUA GROUP IN AFRICA; COMPANY STRATEGY AND CONTRIBUTION TO THE AFRICAN AQUACULTURE VALUE CHAIN
- 10:20 Nelly Isyagi**
AN OVERVIEW OF THE STRATEGIES AND AGENDA FOR PROMOTING SUSTAINABLE AQUACULTURE DEVELOPMENT ON THE CONTINENT
- 10:40 Ayodeji A. Adeoye, Olutosin I. Ilawole**
NEW FRONTIERS FOR ECONOMIC GROWTH – SPOTLIGHT ON NIGERIA AQUACULTURE INDUSTRY
- 11:00 Ram C. Bhujel**
BUILD MORE BRIDGES BETWEEN AFRICA AND ASIA FOR SUSTAINABLE AQUACULTURE
- 11:20 Alexander Michael Kaminski, Sven Genschick, Alexander Shula Kefi, Froukje Kruijssen**
TRENDS IN AQUACULTURE VALUE CHAIN DEVELOPMENT IN SUB-SAHARAN AFRICA: THE CASE OF ZAMBIA
- 11:40 Krishen J. Rana**
AFRICAN AQUACULTURE REMAINS IN THE DOLDRUMS: CRITICAL ANALYSIS IDENTIFYING AND UNDERSTANDING DRIVERS FOR TRANSFORMING CHALLENGES INTO OPPORTUNITIES
- 12:00 Seamus Murphy, Froukje Kruijssen, Malcolm Dickson, Cynthia McDougall**
ADDRESSING GENDER-BASED CONSTRAINTS TO LIVELIHOODS OF MALE AND FEMALE INFORMAL FISH RETAILERS IN EGYPT
- 12:20 Abisola Oluwadamilola Akinyemi, Bernadette Tosan Fregene, Bolarin Titus Omonona**
GENDER ROLES AND POST-HARVEST LOSSES ALONG AQUACULTURE VALUE CHAIN IN SOUTH WEST STATES OF NIGERIA
- 12:40 Akua Akuffo, Kwamena Quagraine**
EFFECT OF COMMUNITY DEVELOPMENT OUTCOMES ON SEAFOOD ACCESSIBILITY AND CONSUMPTION IN TANZANIA
- 13:00 Ulf Nermark**
FISH VALUE CHAIN ISSUES IN BOTSWANA

WEDNESDAY

OFFSHORE AQUACULTURE AND CAGE CULTURE

Wednesday, June 28 9:00 - 13:00 Meeting Room 2.44

Chair: Langley Gace

- 9:00 Leigh A. Kroeger**
SUSTAINABLE DEVELOPMENT AND GOVERNANCE OF THE OFFSHORE
AQUACULTURE INDUSTRY IN ISRAEL
- 9:20 Khalid Salie, Louw Hoffman, Mauritz Viljoen**
DETERMINING PRODUCTION CHARACTERISTICS OF DUSKY KOB *Argyrosomus*
japonicus GROWN IN SEA CAGES UNDER COMMERCIAL CONDITIONS IN
RICHARDS BAY, SOUTH AFRICA
- 9:40 Guy Gishri**
TECHNOLOGICAL INNOVATION IN OFFSHORE FARMING – THE CASE STUDY
OF GILIOCEAN TECHNOLOGY'S NEW 2000 TLY SUBMERSIBLE OPEN OCEAN
NETCAGES
- 10:00 Christopher Mulanda Aura, Robert Wanyama, Ernest Yongo, Safina Musa,
Henry Mbugua, John K. Okechi, Veronica Ombwa, Jacob Abwao, Samson Kidera,
Zachary Ogari, Harrison Charo-Karisa, James Njiru**
TOWARDS BALANCING LAKE-USE AND CULTURE FISHERIES OFF LAKE VICTORIA
BEACHES, KENYA: INTEGRATING MAPPING AND SOCIO-ECONOMIC ASSESSMENT
OF CAGES
- 10:20 Break**
- 11:00 Langley Gace, Steve Sutton, Tyler Sclodnick, Luis Rodriguez, Nolan Grose**
IN SITU MEASUREMENT OF THE DRAG COEFFICIENT OF MESH WITH VARYING
LEVELS OF BIOFOULING
- 11:20 Messias A. Macuiane, Robert E. Hecky, Stephanie J. Guildford**
DEVELOPMENT OF A CARRYING CAPACITY MODEL FOR SUSTAINABLE CAGE
AQUACULTURE IN LAKE MALAWI, NIASSA, NYASA
- 11:40 Emmanuel T.D. Mensah, Hedrick R. Dankwa, Ruby Asmah, Lauridsen L. Torben,
Benjamin B. Campion, Regina Edziyie**
EFFECTS OF SEASONAL ENVIRONMENTAL CHANGES ON CAGE FISH
PRODUCTION IN LAKE VOLTA, GHANA
- 12:00 Gianmarco S. David, Louise Schlüter, Lisangela C. Caceris, Andrea Tucci, Andrea
S. Dias, Cacilda T. J. Mercante, Reinaldo J. da Silva, Niels O. G. Jørgensen**
MONITORING CYANOBACTERIA IN LARGE FRESHWATER RESERVOIRS WITH
OPEN CAGE AQUACULTURE SYSTEMS BY *IN SITU* FLUORIMETRY
- 12:20 Theodore Seemule, Maiba Samunzala, MD Ghulam Kibria**
POTENTIALITY OF DAMS THROUGH CAGE FARMING AND ECO-TOURISM
INDUSTRY IN SPEDU REGION, BOTSWANA
- 12:40 Raymond Clancy**
CONTROLLING PREDATOR ATTACKS ON FLOATING FISH CAGES

WEDNESDAY

STUDENT SCIENTIFIC WRITING WORKSHOP

Wednesday, June 28 9:00 - 13:00 Meeting Room 1.61

Chair: Rodrigue Yossa

IMPROVING SCIENTIFIC WRITING AND TOOLS FOR RESEARCH ORGANIZATION

A well-written and thoroughly organized manuscript is easy to read and presents data in a manner easy to understand. The first portion of this workshop, given by Dr. Rodrigue Yossa, seeks to provide students with some insights on research organization and manuscript presentation.

The second portion of this workshop, STUDENT "R" WORKSHOP, will take place on Thursday, June 29 at 14:00 in Room 1.43

SHRIMP FARM DESIGN AND MANAGEMENT

Wednesday, June 28 9:00 - 13:00 Meeting Room 2.64

Chairs: Craig Browdy, Darryl Jory



- 9:00 Farshad Shishehchian**
PROFITABILITY IN AQUACULTURE WITH EMPHASIS ON SHRIMP FARMING
Penaeus vannamei
- 9:20 Silvio Peixoto**, Euclides Silva, Camila Barros Costa, Roberta Cavalcanti Nery, Flávio Floro Rodrigues, José Filipe Silva, Ranilson de Souza Bezerra, Roberta Borda Soares
EFFECT OF FEEDING FREQUENCY ON GROWTH AND ENZYMATIC ACTIVITY OF *Litopenaeus vannamei* IN BIOFLOC SYSTEM
- 9:40 Darryl E. Jory**
A REVIEW OF GLOBAL SHRIMP FARMING ISSUES AND PERSPECTIVES, AND PROSPECTS FOR INDUSTRY DEVELOPMENT IN AFRICA
- 10:20 Break**
- 11:00 John Hargreaves**
RECIRCULATING POND SYSTEMS: MODELS FOR SHRIMP FARMING IN AFRICA
- 11:20 Matt Slater**, Bérenger Colsoul, Gregor Jähne
SHRIMP AQUACULTURE IN EUROPE – A SUSTAINABLE FUTURE?
- 12:00 Leslie V. Knoesen**, Leandro Castro
PRACTICAL EXPERIENCE WITH THE DESIGN, CONSTRUCTION AND MANAGEMENT OF A COMMERCIAL INDOOR SUPER INTENSIVE SHRIMP CULTURE SYSTEM
- 12:20 Wilson Wasileaky**
CURRENT STATUS OF *Litopenaeus*

VETERINARY CAPACITY, DRUGS, CHEMOTHERAPY, DISEASE – CONTINUED

Wednesday, June 28 9:00 - 17:30 Roof Terrace Room

Chairs: John Walakira, Stephanie Steeves, Horst Kaiser



MSD

Animal Health

FISH HEALTH

- 9:00 Posian S. Wamala**, Kizito K. Mugimba, Denis K. Byarugaba, Evensen Øystein, Stephen Mutoloki, Henning Sorum
DETERMINATION AND ANTIBIOTIC RESISTANCE PROFILES OF BACTERIAL PATHOGENS OF *Oreochromis niloticus* AND *Clarius gariepinus* IN UGANDA
- 9:20 Vuyokazi Kutu**, Brett M. Macey, Dirk Bellstedt, Anna Mouton
TOWARDS THE DEVELOPMENT OF A VACCINE AGAINST LACTOCOCCOSIS IN FARMED RAINBOW TROUT
- 9:40 Agnieszka Pekala**, Beata Wiecek, Agnieszka Tkaczyk, Ewa Pazdzior, Magdalena Podolska
MICROFLORA ISOLATED FROM SKIN ULCERS IN COD *Gadus morhua* FROM THE SOUTHERN BALTIC SEA
- 10:00 De-Hai Xu**, Dunhua Zhang, Gabriel Moreira, Craig Shoemaker, Joseph Newton
DISTRIBUTION OF VIRULENT *Aeromonas hydrophila* IN CHANNEL CATFISH TISSUES FOLLOWING WATERBORNE EXPOSURE
- 10:20 Break**
- 11:00 Horst Kaiser**, Ian Anderson, Sarah Burger, Andreas Cross, Blaze Haselau, Tai Higgs, Stephanie Hollanda, Sfiso Maseko, Emily Moxham, Ayrelia Moodley, Pule Mpopetsi, Lwazi Nombembe, Dustin Phelan, Nathan Richardson, Chase Le Roux, Timothy Smith, Jedrick D. Theron, Nick van Wyk
ANAESTHESIA IN FISH AFTER PRE-DOSING WITH THE ANAESTHETIC AT A LOW CONCENTRATION FOR A SHORT PERIOD
- 11:20 Horst Kaiser**, Joe Balmer, Vivienne Dames, Luke Kemp, Michael Skeeles, Adam Trotter, Aidan van Huyssteen, Jason Wright
THE USE OF CRYSTAL MENTHOL AS AN ANAESTHETIC IN TILAPIA *Oreochromis mossambicus* AT THREE WATER SALINITIES AND TWO TEMPERATURES
- 11:40 Kenneth D. Cain**, Ponnerassery S. Sudheesh
CROSS-PROTECTION TO EMERGING FLAVOBACTERIAL PATHOGENS FOLLOWING VACCINATION WITH A LIVE ATTENUATED *Flavobacterium psychrophilum* VACCINE (FP-B.17-ILM)
- 12:00 Hui Li**
METABOLICS AS A FUNCTIONAL TOOL IN COMBATING ANTIBIOTIC-RESISTANT *Vibrio alginolyticus*
- 12:20 Geraldine K. Matolla**, Phillip Raburu, Moses Ngeiywa
HELMINTH PARASITES OF TILAPIA *Oreochromis niloticus* IN SMALL WATER BODIES IN UASIN GISHU AND SIAYA COUNTIES, KENYA

WEDNESDAY

13:00 LUNCH**14:30 Meg Wilson**

NATIONAL COUNCIL OF SPCAS: MANDATE AND EXPERIENCE RELATING TO AQUACULTURE

14:50 Bolade Adeyemo, Oloyede Tiamiyu, Victoria Ayuba

EFFECTS OF DIETARY EXPOSURE TO GRADED CONCENTRATIONS OF MIXTURES OF AFLATOXIN B1 AND FUMONISIN B1 ON GROWTH PERFORMANCE, HAEMATOLOGY AND SERUMBIOCHEMISTRY OF *Heterobranchus longifilis* CATFISH

15:10 Eman Zahran, Engy Risha, Dušan Palić

EFFECTS OF CHLORPYRIFOS EXPOSURE ON HEMATOLOGICAL PARAMETERS, ANTIOXIDANT STATUS, AND IMMUNE GENE EXPRESSION IN NILE TILAPIA *Oreochromis niloticus*

15:30 Gianluigi Negroni, Federico Rivalta

FISH FARM WATER TREATMENT: NEW MULTI-APPROACH FOR APPLICATION OF SODIUM FERRATE

ENVIRONMENT – CONTINUED

Wednesday, June 28 9:00 - 17:30 Meeting Room 1.44

Chairs: Grant Pitcher, Jan-Willem van Bochove

9:00 Lindsay M. Brager, Peter J. Cranford, David Wong, Fred Page

DETERMINATION OF BENTHIC EFFECTS FROM EXCESS ORGANIC ENRICHMENT: ALTERNATIVE METHODS AND TEST APPLICATION NEAR ATLANTIC SALMON *Salmo salar* AQUACULTURE NET-PENS

9:20 Nigel Keeley, Raymond Bannister, Skye Woodcock, Thomas Valdemarsen, Marianne Holmer

IMPLICATIONS OF SALMON FARMING IN DISPERSIVE COASTAL SITES – ARE THESE ENVIRONMENTS BETTER SUITED TO COPE WITH ORGANIC WASTES?

9:40 Brent A. Law, Vanessa Zions, Peter Cranford, Lindsay Brager, Raymond Bannister, Nigel Keeley

EVALUATING PARTICLE PACKAGING AND TRANSPORT AT AN ACTIVE AREA OF SALMON AQUACULTURE OVER A MIXED GRAIN SIZE SEABED

10:00 Henk B. Stander, Khalid Salie, Philip Barnard, Wimpie Louw

EVALUATION OF GENETICALLY MODIFIED SALMON IN A COMPARATIVE GROWTH TRIAL WITH NON-GENETICALLY MODIFIED ATLANTIC SALMON *Salmo salar* AT AN APPROVED GM RESEARCH FACILITY IN SOUTH AFRICA

10:20 Break**11:00 Skye Woodcock**, Tore Strohmeier, Nigel Keeley, Raymond Bannister, Øivind Strand

TRACING AQUACULTURE WASTE ACROSS A PRODUCTION CYCLE USING FATTY ACIDS AND STABLE ISOTOPES

11:20 Raymond J. Bannister, Ingrid Askeland Johnsen, Pia Kupka Hansen, Tina Kutti, Lars Asplin

DEVELOPING DISPERSAL MODELLING TOOLS TO PREDICT REGIONAL ENVIRONMENTAL IMPACTS OF LARGE SCALE FINFISH AQUACULTURE

- 11:40 Ali Atasever**, Arzu Ozturk Kesebir, Mehmet Ciftci, Hasan Ozdemir
INVESTIGATIONS ON PURIFICATION AND CHARACTERIZATION OF
6-PHOSPHOGLUCONATE DEHYDROGENASE FROM RAINBOW TROUT GILLS AND
INHIBITION EFFECTS OF SOME METAL IONS ON THE ENZYME ACTIVITY
- 12:00 Gabriel Akoko Juma**, Justine M. Njeru
ROLE OF COMMUNITY FOREST ASSOCIATIONS IN FOREST CONSERVATION: CASE
OF CHUKA BLOCK OF MOUNT KENYA FOREST, KENYA
- 12:20 Christopher W. McKindsey**, Philippe Archambault, Luc A. Comeau, Annick Drouin,
Émilie Simard
LOBSTER MOVEMENT AROUND MUSSEL FARMS IN EASTERN CANADA
- 13:00 LUNCH**
- 14:30 Nelly Isyagi**
A SYNTHESIS OF AFRICAN ENVIRONMENTAL ISSUES AND REGIONAL
APPROACHES FOR SUSTAINABLE ENVIRONMENTAL MANAGEMENT FOR
SUSTAINABLE AQUACULTURE DEVELOPMENT
- 14:50 Jan-Willem van Bochove**, John Pilgrim, Suzanne Livingstone, Robin Mitchell
APPLICATION OF BIODIVERSITY OFFSETS TO ADDRESS RESIDUAL IMPACTS
FROM AQUACULTURE
- 15:10 Narcisca Bandarra**, Claudia Afonso, Carlos Cardoso, Pedro Pousão-Ferreira
MARINE RESOURCES FOR A HEALTHIER FUTURE: MEETING THE
ENVIRONMENTAL, ECONOMIC, AND TECHNOLOGICAL CHALLENGES OF THE
OCEANS
- 15:30 Etienne Hinrichsen**
ECOLOGICAL RISK ASSESSMENT IN AQUACULTURE – A NEW APPROACH

GENERAL NUTRITION AND FEEDS

Wednesday, June 28 9:00 - 17:30 Meeting Room 2.61

Chairs: Lourens De Wet, Ron Hardy, Julius Manyala

- 9:00 Krishen J. Rana**
LOOKING BEYOND THE FISH MEAL DILEMMA: A MISPLACED THESIS FOR
AQUACULTURE FOCUS AND EXPANSION
- 9:20 Oyedapo A. Fagbenro**, James K. Ilori
FISHERY WASTES MANAGEMENT: THE AQUAFEED OPTION
- 9:40 Zacharia Shitote**
REVOLUTION IN FISH FEED AND NUTRITION IN KENYA'S AGRICULTURE
INDUSTRY
- 10:00 Fawad Aziz**, Zaigham Hasan, Kalim Ullah, Saifullah Khan
UTILIZATION OF VEGETABLE WASTE AS A SOLE FEED IN THE DIET OF ROHU
Labeo rohita FINGERLINGS
- 10:20 Break**

- 11:00 Andrew Mallison**
MARINE INGREDIENTS IN AQUACULTURE FEEDS – AVAILABILITY, SUSTAINABILITY AND CONTRIBUTION IN FUTURE
- 11:20 Mustafa Yildiz**, Irem Kose, Ghassan Issa, Tolga Kahraman, Erdogan Guven, Samuel Ofori-Mensah, Muhammet Ali Baltaci, Keriman Yuruten
EFFECTS OF SUBSTITUTING FISH OIL WITH MIXTURES OF VEGETABLE OILS ON GROWTH PERFORMANCE, FATTY ACIDS AND FLESH QUALITY OF RAINBOW TROUT
- 11:40 Erhwose E. Omovwohwovie**, Eguono S. Osaide, Blessing C. Okogbue
CHEMICAL AND NUTRITIONAL VALUE OF MELON SHELL AS POSSIBLE FISH FEED INGREDIENT
- 12:00 Richard Taylor**, Clifford Jones, Richard Laubscher, Keith Cowan
BIODIGESTION OF CULTURED UNICELLELAR ALGAE
- 12:20 Tom Wedegaertner**
WITHOUT GOSSYPOL, COTTONSEED PROTEIN SUBSTITUTES FOR FISH MEAL IN DIETS FED TO SHRIMP *Litopenaeus vannamei*, BLACK SEA BASS *Centropristis striata*, POMPAÑO *Trachinotus carolinus*, AND FLOUNDER *Paralichthys lethostigma*
- 12:40 Nyiko C. Mabasa**, Peter J. Britz, Clifford L.W. Jones
THE EFFECT OF CARBOHYDRATE ON DUSKY KOB *Argyrosomus japonicus* FED PELLETTED DIETS
- 13:00 LUNCH**
- 14:30 Delbert M. Gatlin III**, Sergio Castillo
DIETARY AMINO ACID REQUIREMENTS OF THE RED DRUM *Sciaenops ocellatus*
- 14:50 Igor Pirozzi**
NUTRITIONAL MODELLING OF PROTEIN, AMINO ACID AND ENERGY REQUIREMENTS OF TIGER GROUPER *Epinephelus fuscoguttatus*
- 15:10 Lukas Manomaitis**, Dominique P. Bureau
THE INTERNATIONAL AQUACULTURE FEED FORMULATION DATABASE (IAFFD): A STANDARDIZED, PUBLICLY AVAILABLE AQUACULTURE FEED FORMULATION DATABASE
- 15:30 Noor Khan**, Rafia Tayyab, Mahanama Dezoysa
COMPARATIVE STUDIES OF BETA GLUCAN AND PLANT STIMULANTS ON THE GROWTH AND IMMUNE RESPONSE OF *Labeo rohita*
- 15:50 Ana S. Gomes**, Koji Murashita, Francesca Vacca, Elena Bossi, Tiziano Verri, Ann-Elise O. Jordal, Anders Aksnes, Ivar Rønnestad
SENSING AND TRANSPORT OF PEPTIDES IN THE GASTRO-INTESTINAL TRACT OF ATLANTIC SALMON
- 16:10 Alexandre Bédier**, Vincent Bernier, Jérémie Chanut, Emmanuel Tessier, Piet Verstraete
EFFECTS OF DIFFERENT PROTEIN AND LIPID RATIOS ON GROWTH, FISH QUALITY AND HEAVY METALS BIOACCUMULATION DURING A COMPLETE GROWOUT CYCLE OF RED DRUM *Sciaenops ocellatus* IN A RECIRCULATED AQUACULTURE SYSTEM

- 16:30 Collins P. Duodu**, Daniel Adjei-Boateng, Regina Edziyie, Nelson W. Agbo, Godfred Owusu-Boateng, Bodil K. Larsen, Peter V. Skov
INFLUENCE OF PROCESSING TECHNIQUES ON THE PROXIMATE COMPOSITION, AMINO ACID PROFILE, AND SOME PHYTOCHEMICALS OF SELECTED OILSEED BY-PRODUCTS OF POTENTIAL USE IN ANIMAL FEED
- 16:50 Mikhail M. Solovyev**, Galina. I. Izvekova, Elena N. Kashinskaya, Enric Gisbert
DEPENDENCE OF PH VALUES IN THE DIGESTIVE TRACT OF FRESHWATER FISHES ON SOME ABIOTIC AND BIOTIC FACTORS

TILAPIA

Wednesday, June 28 9:00 - 17:30 Ballroom West

Chairs: Kevin Fitzsimmons, Hussein Elboghassy

- 9:00 Farhad Rajabipour**, Nassrin Mashaii, Habib Sarsangi, Mohammad Mohammadi, Mohammad Jafari, Seyed Jalil Zorrieh Zahra, Mostafa Sharif Rohani, Abolfazl Sepahdari
PATHOGEN MONITORING IN INDOOR SYSTEMS OF TILAPIA AQUACULTURE IN IRAN
- 9:20 David Fincham**
TILAPIA FARMING VIA RYDAWI'S FARMINABOX – FROM POND TO RECIRCULATION AQUACULTURE SYSTEM FOR AFRICA
- 9:40 Maria Celia Portella**, Sara Mello Pinho, Emerson G. Durigon, Tayna Sgnaulin, Marcos Blum, Mauricio G.C. Emerenciano
NILE TILAPIA NURSERY IN AQUAPONIC SYSTEM USING BIOFLOC TECHNOLOGY: PRELIMINARY RESULTS
- 10:00 Abdel-Fattah El-Sayed**
TILAPIA CULTURE SUCCESS IN EGYPT: A MESSAGE TO AFRICA
- 10:20 Break**
- 11:00 Levinus Leonard Mapezi**, Aviti John Mmochi
ROLE OF SALINITY ON GROWTH PERFORMANCE OF *Oreochromis niloticus* ♀ AND *Oreochromis urolepis urolepis* ♂ HYBRIDS
- 11:20 Joseph R. Sullivan**
SOME COMMON THEMES FOR USAID FARMER-TO-FARMER SMALL SCALE AQUACULTURE ASSISTANCE IN SUB-SAHARAN AFRICA: ALL-MALE TILAPIA PRODUCTION
- 11:40 Kevin Fitzsimmons**
2017 – SUPPLY AND DEMAND IN TILAPIA MARKETS
- 13:00 LUNCH**
- 14:30 Nassrin Mashaii**, Farhad Rajabipour, Habib Sarsangi, Mohammad Mohammadi, Abbas Matinfar, Homayun Hossein-Zadeh
OPTIMIZING SOME BREEDING FACTORS OF CULTURED NILE TILAPIA *Oreochromis niloticus* UNDER BRACKISH WATER

- 14:50 Bartholomew W. Green**, David R. Teichert-Coddington, Esam H. Rizkalla
DEGREE-DAYS AS A TOOL FOR USE IN PRODUCING TILAPIA FRY FOR SEX INVERSION
- 15:10 Brian K. Catanzaro**, Matthew R. Dawson
IMPROVED GENETICS AND A NOVEL FEEDING STRATEGY FOR IMPROVED GROWTH RATES OF NILE TILAPIA *Oreochromis niloticus* IN A RECIRCULATING AQUACULTURE SYSTEM
- 15:30 Emmanuel A. Frimpong**
THE LOW-PRODUCTIVITY SYNDROME OF TILAPIA IN SUB-SAHARAN AFRICA: SHALLOW PONDS, IN-POND REPRODUCTION AND POOR AQUAFEDS IN GHANA
- 15:50 Junning Cai**, PingSun Leung, Yongju Luo, Xinhua Yuan, Yongming Yuan
IMPROVING THE TECHNICAL AND ECONOMIC PERFORMANCE OF TILAPIA AQUACULTURE UNDER CLIMATE VARIATION: PERSPECTIVE FROM BIO-ECONOMIC MODELLING
- 16:10 Thomas William Kelly**
TILAPIA FARMING IN SOUTH AFRICA – PROBLEMS AND SOLUTIONS
- 16:30 David O. Mirera**, Cedric J. Simon, Jennifer M. Cobcroft, Greg J. Coman
EVALUATING THE PERFORMANCE OF FRESHWATER NILE TILAPIA *Oreochromis niloticus* FROM EAST AFRICA AT DIFFERENT SALINITIES AND ON DIFFERENT FORMULATED FEEDS
- 16:50 Andre P. Seale**, Leonard G. Obaldo, Todd E. Low, Darren K. Okimoto, Liz J. Xu
TILAPIA INDUSTRY IN HAWAI'I: AN UPDATE
- 17:10 Nicholas P.E. James**
THE TILAPIA SECTOR IN SOUTHERN AFRICA: STATUS AND INTERACTION WITH GOVERNMENTS

SEA CUCUMBERS

Wednesday, June 28 9:00 - 17:30 Meeting Room 2.41

Chairs: Cathy Hair, Georgina Robinson

- 9:00 Jorge A. Domínguez-Godino**, Mercedes González-Wangüemert
ESTABLISHING THE BASELINE OF SEA CUCUMBER AQUACULTURE IN EUROPE
- 9:20 Holger Kuehnhold**, Matthew J. Slater, Elham Kamyab, Sara C. Novais, Marco F. Lemos, Lisa Indriana, Andreas Kunzmann
DETECTING THERMAL -SHOCK AND -ACCLIMATION IN THE SEA CUCUMBER *Holothuria scabra*, USING A MULTIPLE BIOMARKER APPROACH
- 9:40 Duy Nguyen Dinh Quang**, Paul C. Southgate
A NEW APPROACH TO FEEDING LARVAE AND EARLY JUVENILES OF SANDFISH *Holothuria scabra* SUPPORTING SIMPLIFIED HATCHERY CULTURE METHODS
- 10:20 Break**

- 11:00 Bruno L. Gianasi**, Jean-François Hamel, Annie Mercier
MORPHOMETRIC AND BEHAVIOURAL CHANGES IN THE EARLY LIFE STAGES OF THE SEA CUCUMBER *Cucumaria frondosa*
- 11:20 Roselyn D. Noran**, Jon P. Altamirano, Charlemagne P. Recente
REARING PERFORMANCE OF FLOATING HAPA BAG NETS FOR JUVENILE SANDFISH *Holothuria scabra* IN CENTRAL PHILIPPINES
- 11:40 Jon Altamirano**, Marie Antonette Juinio-Meñez, Wilfredo Uy, Margarita dela Cruz, Bryan Dave Radjac Rodriguez, Cathy Hair, David Mills
UNDERSTANDING BIO-PHYSICAL VARIABILITY IN SEA CUCUMBER RANCHING SITES IN THE PHILIPPINES
- 12:00 Cathy Hair**, Peter Wood, Paul C. Southgate
USING GIS CLASSIFICATION METHODS TO PREDICT SUITABLE HABITAT FOR SEA RANCHING OF CULTURED SANDFISH *Holothuria scabra* IN PAPUA NEW GUINEA
- 12:20 Timothy Klückow**, Charlie Gough, Frances Humber
FARMING MODEL CHANGES AND THEIR RATIONALE AFTER EXPERIMENTAL TRIALS AND 7 YEARS PROJECT HISTORY FARMING *Holothuria scabra* IN SEA PENS IN SOUTH-WEST MADAGASCAR
- 12:40 Timothy Mark Klückow**
EFFECT OF BIOMASS DENSITY, HANDLING STRESS, AND NON-FALLOWING OF SEDIMENT ON THE GROWTH AND SURVIVAL OF *Holothuria scabra*
- 13:00 LUNCH**
- 14:30 Ruth Gamboa**, Renz Bulseco, Lance Concepcion, Remie Aurelio, Neil Angelo Abreo
GROWTH OF SANDFISH *Holothuria scabra* JUVENILES DURING AN ENSO
- 14:50 Stefan Spreitzenbarth**, Matthew Slater
POLY CULTURE OF SANDFISH *Holothuria scabra* AND PACIFIC WHITE SHRIMP *Litopenaeus vannamei* – A VIABLE APPROACH FOR A SUSTAINABLE FUTURE?
- 15:10 Young Dae Kim**, Mi Seon Park, Yun Kyung Shin, Myoung Ae Park, Yong Hyun Do
A STUDY ON THE POLY CULTURE OF SEA SQUIRT *Halocynthia roretzi* AND SEA CUCUMBER *Apostichopus japonicus* UNDER A HANGING CULTURE SYSTEM
- 15:30 Georgina Robinson**
MICROBIAL – DEPOSIT FEEDER AQUACULTURE BIOREMEDIATION SYSTEMS
- 15:50 Fernando G. Cánovas**, Jorge Domínguez-Godino, Mercedes González-Wangüemert
SHORT TERM APPROACH TO EPIDEMIOLOGY OF SKIN DISEASE IN THE NEW TARGET SPECIES FOR AQUACULTURE IN EUROPE *Holothuria arguensis*

EDUCATION, EXTENSION AND TECHNOLOGY TRANSFER – CONTINUED

Wednesday, June 28 9:00 - 17:30 Meeting Room 1.63

Chairs: Clifford Jones, John Baliwra, Regina Edziyie

- 9:00 Jennifer M. Cobcroft**
NAVIGATING THE DEMANDS OF RESEARCH AND INDUSTRY NEEDS: TOOLS FOR STUDENTS AND EARLY CAREER RESEARCHERS
- 9:20 Shingo Takahashi**, Saw Lar Phaw Wah
A CASE STUDY OF “FARMER TO FARMER” EXTENSION OF SMALL-SCALE AQUACULTURE FOR LIVELIHOOD IMPROVEMENT IN MYANMAR
- 9:40 Hippolyte L.M. Houenou**, Arsène F.M. d’Almeida, Masanori doi
FARMER-TO-FARMER EXTENSION APPROACH AS AN EFFECTIVE TOOL FOR FRESHWATER AQUACULTURE DEVELOPMENT IN BENIN, WEST AFRICA
- 10:00 Clifford L.W. Jones**
HOW TO DEVELOP MSC/PHD CURRICULA THAT ACCOMMODATE STUDENTS FROM A DIVERSE RANGE OF FOUNDATION TRAINING?
- 10:20 Break**
- 11:00 Charles Masembe**, Vincent Muwanika
HARNESSING ADVANCES IN MOLECULAR GENETICS FOR AQUACULTURE AND FISHERIES TRAINING IN AFRICA
- 11:20 Daud Kassam**, Emmanuel Kaunda, Wilson Jere, Jeremiah Kang’ombe, Joseph Dzanja, Lawrence Mapemba, Joshua Valeta, Daniel Sikawa, Vincent Mlotha
AFRICA CENTRE OF EXCELLENCE IN AQUACULTURE AND FISHERIES (AQUAFISH): EXPLORING INNOVATIVE WAYS OF TEACHING AND CURRICULUM DEVELOPMENT IN ITS POSTGRADUATE PROGRAMMES
- 11:40 Khalid Salie**
THE RELEVANCE OF POSTGRADUATE QUALIFICATIONS TO AQUACULTURE RESEARCH AND DEVELOPMENT IN AFRICA
- 12:00 John S. Balirwa**, Charles Masembe
STRENGTHENING THE EFFECTIVENESS OF AQUACULTURE AND FISHERIES SCIENCE CURRICULA IN AFRICA
- 12:20 Stephen Mutoloki**, Robinson Mdegela, Denis Byarugaba, Paul Mbutithia, Aviti Mmochi, Kaampwe Muzandu, Jan Lyche, Øystein Evensen
POST-GRADUATE TRAINING AND RESEARCH IN AQUATIC AND ENVIRONMENTAL HEALTH IN EASTERN AND SOUTHERN AFRICA
- 12:40 Peter Akoli**, Adamneh Dagne, Silke Drexler, Boaz Kaunda-Arara, Godfrey Kawoya Kubiriza, Robinson Odong, Herwig Waidbacher, Gerold Winkler, Gladys Bwanika, Paul Nampala, Ruth Nsibirano, Mercy M. Ntangaare, David Liti, Yared Tigabu, Kibru Teshome, Abebe Cheffo, Charles Masembe
ENHANCING GRADUATE TRAINING AND RESEARCH IN AQUACULTURE THROUGH INSTITUTIONAL COLLABORATIONS
- 13:00 LUNCH**

- 14:30 Matthew Tenywa Mwanja**, Margaret Banga, Wilson Waiswa Mwanja
ISSUES TO CONSIDER IN DEVELOPING AN EFFECTIVE REGIONAL FIT-FOR-PURPOSE COLLABORATIVE PHD PROGRAMME IN FISHERIES AND AQUACULTURE
- 14:50 Charles Ngugi**, Julius O. Manyala
SOME CHALLENGES AND OPPORTUNITIES IN CAPACITY BUILDING AT POST GRADUATE LEVEL IN FISHERIES AND AQUACULTURE IN EAST AFRICA
- 15:10 Phillip Okoth Raburu**, Kevin O. Obiero, Alfred O. Achieng'
CHALLENGES FACING AQUACULTURE POSTGRADUATE CURRICULUM DEVELOPMENT AND IMPLEMENTATION IN KENYA
- 15:30 Ruth N. Otunga**
CURRICULUM DEVELOPMENT AT POSTGRADUATE LEVEL: EXAMPLES IN AQUACULTURE
- 15:50 Karen L. Veverica**, William Daniels, Joe Tomasso
TRAINING FUTURE COMMERCIAL AQUACULTURE MANAGERS THROUGH THE MASTER OF AQUACULTURE AT AUBURN UNIVERSITY
- 16:10 Robinson Odong**, Godfrey Kawooya Kubiriza, Charles Masembe, Peter Akoll
SYNERGISTIC PARTNERSHIPS FOR INTER DISCIPLINARY TRAINING OF AQUACULTURE GRADUATES IN AFRICA
- 16:30 Daniel Sikawa**, Warren M. Potts, Horst Kaiser, Jeremiah Kang'ombe, John Kazembe, Clifford L.W. Jones, Warwick Sauer
THE REVIEW OF AN AQUACULTURE AND FISHERIES PHD BY COURSEWORK CURRICULUM TO SERVE THE NEEDS OF SUB-SAHARAN AFRICA
- 16:50 Kevin O. Obiero**, Herwig Waidbacher, Julius O. Manyala, and Boaz Kaunda-Arara
KNOWLEDGE MANAGEMENT AND INVESTING IN HUMAN CAPACITY DEVELOPMENT FOR AQUACULTURAL EDUCATION AND TRAINING IN AFRICA

IMMUNOLOGY

Wednesday, June 28 11:00 - 13:00 Meeting Room 1.41
Chairs: Julius Manyala, Andre Seale

- 11:00 Jefferson Yunis Aguinaga**, Victor A. Cueva-Quiroz, Fernando C. Ramos-Espinoza, Gustavo S. Claudiano, Bruno M. Verri, Flávio Ruas de Moraes, Julieta R. Engrácia de Moraes
PATHOPHYSIOLOGICAL ASPECTS OF THE INNATE IMMUNE RESPONSE OF *Piaractus mesopotamicus* ALLOXAN-DIABETICS CHALLENGED WITH *Aeromonas hydrophila*
- 11:20 Pål Nilsen**, Marius Karlsen, Timothy W. Flegel, Kallaya Sritunyalucksana, Siripong Thitamadee
PRECISION BOMBING OF THE WHITE SPOT SYNDROME VIRUS TRANSCRIPTOME
- 11:40 Fan-Bin Zhan**, Han Liu, Wei-Min Wang
IDENTIFICATION AND GENE EXPRESSION OF INTERFERON: REGULATORY FACTORS IN *Megalobrama amblycephala*

- 12:00 Karl B. Andree**, Douglas Milne, Cindy Campoverde, Enric Gisbert, Alicia Estevez, Christopher Secombes
GENE EXPRESSION ANALYSIS OF ANTIMICROBIAL PEPTIDES DURING LARVAL REARING AND GROW-OUT OF MEAGRE *Argyrosomus regius*
- 12:20 Evelyn Raphalo**, Yongjiu Chen
CHARACTERIZATION OF IMMUNE-RELATED GENES IN SMALL YELLOW CROAKER *Larimichthys polyactis* USING NEXT-GENERATION SEQUENCE ANALYSIS

POLICY AND REGULATION

Wednesday, June 28 14:30 - 17:30 Meeting Room 1.61

Chair: Nelly Isyagi

- 14:30 Chin Yee Chan**, Nhuong Tran, Timothy B. Sulser, Michael J. Phillips, Miroslav Batka, Sloans Chimatiro, Malcolm Dickson
FISHERIES AND AQUACULTURE FUTURES IN AFRICA
- 14:50 Yang Han**
MARINE FISHERIES POLICY IN CHINA: PAST, PRESENT AND FUTURE
- 15:10 Chika F. Ikeogu**, Ebuka B. Okeke, Emmanuel T. Asogwa, Ezinwanne M. Nnamani
THE POTENTIALS OF AQUACULTURE DEVELOPMENT IN FISHING COMMUNITIES OF ANAMBRA STATE: A CASE STUDY OF UGBENU COMMUNITY
- 15:30 Zinasa Jika**
THE AQUACULTURE DEVELOPMENT BILL: A NEW APPROACH TOWARDS REGULATING AQUACULTURE IN SOUTH AFRICA
- 15:50 Graeme Bowley**
POLICY AND REGULATION PROCESSES TO SUPPORT AQUACULTURE INDUSTRY DEVELOPMENT IN NSW, AUSTRALIA

NORTH / WEST AFRICA – REGIONAL OVERVIEW

Wednesday, June 28 14:30 - 17:30 Auditorium 2

Chairs: Hussein Elboghassy, Sherif Sadek, Bamidele Omitoyin

- 14:30 Mohamed Hichem Kara**, Denis Lacroix, Shérif Sadek, Jean Paul Blancheton, Héléne Rey-Valette, Mejjeddine Kraiem
TWENTY YEARS OF AQUACULTURE IN NORTH AFRICA: DEVELOPMENTS, CRITICAL ASSESSMENT AND FUTURE
- 14:50 Hussein Elghobashy**
AQUACULTURE DEVELOPMENT IN EGYPT
- 15:10 Ismael Radwan**
AQUACULTURE DEVELOPMENT AT KAHR EL SHEIKH CASE STUDY
- 15:30 Sherif Sadek**, Mohamed Hichem Kara, Houssam Hamza, Hassan Nhhala, El Mustafa Ait Chattou, Lseideeq Jumamah Alashhab, Valerio Crespi
AN OVERVIEW OF DESERT AQUACULTURE IN NORTH AFRICA

- 15:50 Chika F. Ikeogu**, Chioma N. Okekembachi
CRITICAL SUCCESS FACTORS OF CATFISH FARMING IN ANAMBRA STATE NIGERIA
- 16:10 Nanan Kouamé Félix Kouadio**
AQUACULTURE POLICIES, AGRICULTURAL TRADITION AND PISCICULTURE DEVELOPMENT IN KORHOGO DEPARTMENT (IVORY COAST)
- 16:30 Mosunmola Lydia Adeleke**
POTENTIALS OF CAPTURE BASED AQUACULTURE (CBA) IN THE COASTAL REGIONS OF ONDO STATE, NIGERIA
- 16:50 Emmanuel A. Frimpong**
SETTING A NATIONAL AQUACULTURE PRODUCTION TARGET AND MISSING IT MIGHTILY: REVIEWING AND EXPLAINING CAUSES FOR THE CASE OF GHANA

SHRIMP NUTRITION AND FEED

Wednesday, June 28 14:30 - 17:30 Meeting Room 2.64
Chairs: Craig Browdy, Darryl Jory



- 14:30 Craig Browdy**, Leandro Castro, Peter Van Wyk, Tim Markey, Thomas Zeigler
FEEDS AND FEEDING FOR SUCCESSFUL SHRIMP PRODUCTION
- 14:50 Felipe do Nascimento Vieira**, Fernanda Morais Henriques, Edemar Andreatta, Moises A. Poli, Esmeralda Chamorro Legarda, Jamilly Sousa Rocha, Joselle Redig, Nicole Machado Corrêa, Carlos Andrés Díaz, Débora Machado Fracalossi
PROTEIN REQUIREMENT OF PACIFIC WHITE SHRIMP AT THE INITIAL REARING PHASE IN BIOFLOC SYSTEM
- 15:10 Anneleen Swanepoel**, D. Allen Davis, G.A. Harsha S. Chaturanga, Xuan Qiu
UTILIZATION OF CRYSTALLINE AMINO ACIDS BY PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 15:30 Karthik Masagounder**, Dhanapong Sangsue, Cláudia Figueiredo-Silva, Muhammad Agus Suprayudi
PERFORMANCE OF WHITE LEG SHRIMP *Litopenaeus vannamei* FED HIGH OR LOW FISH MEAL DIET SUPPLEMENTED WITH INCREASING LEVELS OF DL-METHIONYL-DL-METHIONINE
- 15:50 Matthias Nölting**, Laurent Seychelles, Eric De Muylder
A NEW DESICCATION-TOLERANT AND PATHOGEN FREE LIVE FEED FOR SHRIMP AND FISH AQUACULTURE
- 16:10 Daniel Lemos**
CHALLENGES IN ASSESSING NUTRIENT SUPPLY FOR FARMED SHRIMP

16:30 Peter Bossier

MANAGING BIOFLOCS OPERATIONAL PARAMETERS MINIMIZES THE RISK FOR ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND) OUTBREAKS – A LABORATORY STUDY

16:50 Joseph P. Kearns

PRACTICAL APPLICATION OF EXTRUSION TECHNOLOGIES FOR SHRIMP FEEDS

ALTERNATIVE FEED INGREDIENTS

Wednesday, June 28 14:30 - 17:30 Meeting Room 2.44

Chair: Carine van Vuure

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14:30 Carine A. van Vuure

META-ANALYSIS OF DIGESTIBILITY STUDIES OF PROCESSED ANIMAL PROTEINS IN SEVERAL AQUATIC SPECIES COMPARED TO *IN VITRO* METHODS

15:10 Nejdet Gültepe, Osman Sabri Kesbiç, Ümit Acar, Fevziye Işıl Kesbiç

REPLACEMENT OF ANCHOVY MEAL BY GIBEL CARP *Carassius gibelio* MEAL IN RAINBOW TROUT *Onchorhynchus mykiss* DIET

15:30 Serge Dossou, Shunsuke Koshio, Manabu Ishikawa, Saichiro Yokoyama, Philippe Lalèye, Antoine Chikou, Mohammed F. El Basuini, Mahmoud A.O. Dawood
EFFECT OF PARTIAL REPLACEMENT OF FISH MEAL BY GRADED LEVELS OF YEAST-FERMENTED RAPESEED MEAL ON GROWTH, INNATE IMMUNE RESPONSES AND OXIDATIVE STRESS OF JUVENILES RED SEA BREAM *Pagrus major*

15:50 Godfrey Kubiriza Kawooya, Jón Arnason, Ólafur Sigurgeirsson, Robinson Odong, Sigurdur Snorrason, Tumi Tómasson, Helgi Thorarensen
ALTERNATIVE PROTEIN SOURCES TO REPLACE *Rastrineobola argentea* FISHMEAL FROM AQUAFEDS IN EASTERN AFRICA

16:10 Ibrahim Diler, Adem Kurtoglu
EFFECTS OF GILTHEAD SEABREAM *Sparus aurata* FISH FEED REPLACEMENT OF FISH MEAL AT DIFFERENT RATES USE OF CANOLA MEAL *Brassica* spp. ON GROWTH RATE, FEED UTILISATION AND DIGESTIBILITY

16:30 Ingrid Lupatsch
POTENTIAL USE OF A CO-PRODUCT FROM THE BIOETHANOL PROCESS AS A PROTEIN SOURCE IN FEEDS FOR EUROPEAN SEABASS *Dicentrarchus labrax*

16:50 Bruno Marotta Lima, Neuza S. Takahashi, Yara A. Tabata, Ricardo S. Hattori, João P.S. Pinheiro, Renata G. Moreira
METABOLIC EVALUATION OF FISH OIL REPLACEMENT BY SACHA INCHI *Plukenetia volubilis* OIL ON JUVENILES OF RAINBOW TROUT *Oncorhynchus mykiss*

17:10 Lourens F. de Wet, Elsje Pieterse
THE OINTMENT IN THE FLY: PROSPECTS FOR USE OF BLACK SOLDIER FLY *Hermetia illucens* IN AQUAFEDS

SALMONIDS

Wednesday, June 28 14:30 - 17:30 Meeting Room 1.43

Chair: Murat Arslan

- 14:30 Velmurugu Puvanendran**, Stefano Peruzzi, Inger-Britt Falk-Petersen, Lars Olav Ulleberg, Fride Tønning, Ørjan Hagen, Jorge Fernandes, Silvia Martinez Llorens, Guido Riesen, Rudi Ripman Seim
GROWTH OF JUVENILE DIPLOID AND TRIPLOID SALMON *Salmo salar* FED A STANDARD DIET AND AN EXPERIMENTAL DIET CONTAINING HIGH PROPORTIONS OF HYDROLISED PROTEINS
- 14:50 Christian van Rijn**, Paul Jones, Luis O.B. Afonso
EFFECT OF ENVIRONMENTAL FACTORS ON SMOLTIFICATION AND POST-SALTWATER TRANSFER PERFORMANCE AND SURVIVAL OF FARMED TASMANIAN ATLANTIC SALMON *Salmo salar*
- 15:10 Jared J. Tromp**, Mark F. Richardson, Craig D.H. Sherman, Paul L. Jones, John A. Donald, Luis O.B. Afonso
TRANSCRIPTOMAL CHANGES IN JUVENILE PRE-SMOLT ATLANTIC SALMON *Salmo salar* EXPOSED TO A CHRONICALLY ELEVATED WATER TEMPERATURE OF 20°C
- 15:30 Morgan S. Brown**, Jared J. Tromp, Christian A. van Rijn, Paul L. Jones, Luis O.B. Afonso
THE PHYSIOLOGY OF SALTWATER ADAPTATION IN LARGE JUVENILE ATLANTIC SALMON *Salmo salar*
- 15:50 Murat Arslan**, Seyda Tacer, Ozden Fakioglu, Saltuk Bugrahan Ceyhun
A PRELIMINARY STUDY ON OPTIMIZATION OF DIETARY DUCK WEED MEAL IN RAINBOW TROUT JUVENILES
- 16:10 James Thull**
PRESERVING HISTORY AND CULTURE: THE MONTANA STATE UNIVERSITY TROUT AND SALMONID ORAL HISTORY PROJECT

WEDNESDAY

METABOLOMICS

Wednesday, June 28 14:30 - 17:30 Meeting Room 1.41

Chairs: Andre Vosloo, Andrea Alfaro

- 14:30 Andre Vosloo**
THE USE OF METABOLOMICS IN SOUTH AFRICAN AQUACULTURE
- 14:50 Thabani Mdlalose**, Peet J. Jansen van Rensburg, Kevin W. Christison,
Andre Vosloo
UNTARGETED METABOLOMICS ANALYSES OF CULTURED DUSKY KOB
Argyrosomus japonicus IN SOUTH AFRICAN AQUACULTURE
- 15:10 Jeffrey M. Hinshaw**, Adrienne K. Ratti, Benjamin J. Reading
MACHINE LEARNING CLASSIFICATION OF RUSSIAN STURGEON GENDER FROM
PLASMA METABOLOMICS DATA
- 15:30 Xuanxian Peng**
METABOLOMICS APPROACH FOR INVESTIGATION AND CONTROL OF SERUM-
RESISTANT BACTERIA IN AQUACULTURE
- 15:50 Andrea C. Alfaro**, Tim Young
NOVEL METABOLIC AND IMMUNOLOGICAL BIOMARKERS IN OYSTERS
CHALLENGED WITH A VIRULENT STRAIN OF OSHV-1
- 16:10 Leonie Venter**, Peet J. Jansen van Rensburg, Du Toit Loots, Andre Vosloo,
Jeremie Zander Lindeque
APPLICATION OF FUNCTIONAL METABOLOMICS TO IDENTIFY KEY METABOLIC
CHANGES IN *Halotis midae* DUE TO ENVIRONMENTAL HYPOXIA

THURSDAY, June 29

MUSSELS

Thursday, June 29 9:00 - 10:40 Meeting Room 2.41

Chair: Jeanie Stention-Dozey

- 9:00 Ferdie Endemann**
DEVELOPMENT PROSPECTS FOR MUSSEL PRODUCTION AND PROCESSING IN SALDANHA BAY, SOUTH AFRICA
- 9:20 Jeanie Stention-Dozey, Jeffrey Ren**
TEMPORAL AND SPATIAL VARIABILITY IN CULTURED MUSSEL CONDITION (BODY DIMENSIONS, GONAD STATE, AND FATTY AND AMINO ACID PROFILES) IN RELATION TO ENVIRONMENTAL SIGNALS
- 9:40 Kim S. Last, Thomas A. Wilding, Kati Michalek**
NATURAL ENVIRONMENTAL VARIATION: 'FRIEND OR FOE' FOR SCOTTISH BLUE MUSSEL *Mytilus edulis* CULTIVATION
- 10:00 Kati Michalek, Thomas A. Wilding, Luca Telesca, Joseph I. Hoffman, Kim S. Last**
GENOTYPIC AND MORPHOLOGICAL VARIATION IN THE COMMERCIAL CULTURE OF BLUE MUSSELS *Mytilus edulis*

PRODUCT QUALITY, SAFETY, SECURITY, PROCESSING, SEAFOOD AND HEALTH

Thursday, June 29 9:00 - 12:40 Meeting Room 1.43

Chairs: Brett Koonse, Joseph Sullivan

- 9:00 Siyanbola Omitoyin, Olabisi Fawehinmi, Ogunsusi Ifeoluwa**
QUALITY, SAFETY AND INTERNATIONAL TRADE OF AQUACULTURE PRODUCTS IN OYO STATE NIGERIA
- 9:20 Joseph R. Sullivan, Mark Stopha**
SOME COMMON THEMES FOR USAID FARMER-TO-FARMER SMALL SCALE AQUACULTURE ASSISTANCE IN SUB-SAHARAN AFRICA: MAINTAINING POST-HARVEST FISH QUALITY
- 9:40 Sam MacDonald, John Wintermeyer**
MINI-ROVS IMPROVING AQUACULTURE OPERATIONS
- 10:00 Brynn J.A. Simpson, Grant Brooker, Ruben van der Merwe**
OBSERVATIONS ON THE USE OF LIVE-HOLDING SYSTEMS FOR PURGING OF OYSTER, ABALONE AND ROCK LOBSTER PRIOR TO PROCESSING OR LIVE SHIPPING
- 10:20 Thomas E Ellegaard Mohr, Kim Pagh**
EXTRUDED FEED/FOOD QUALITY MANAGEMENT. RELATIONS BETWEEN TECHNOLOGY AND EXTRUDED FEED/FOOD QUALITY

WATER QUALITY

Thursday, June 29 9:00 - 12:40 Meeting Room 2.44

Chair: Khalid Salie

- 9:00 Baba Usman Ibrahim**
STUDY OF HEAVY METAL CONCENTRATION IN WATER AND FISH SPECIES IN RIVER KUNKO, DABBAN, NIGER STATE, NIGERIA
- 9:20 Abdoul-Ibrachi Gouda**, Bruno Schiffers
CONTAMINATION DES ECOSYSTEMES AQUATIQUES PAR LA DERIVE DES PRODUITS PHYTOSANITAIRES

CATFISH AQUAFEED

Thursday, June 29 9:00 - 12:40 Meeting Room 1.61

Chair: Hanno Slawski



- 9:00 Hanno Slawski**
FORMULATING CATFISH FEEDS FOR THE AFRICAN CONTINENT
- 9:40 Odunayo O. Adetuyi**, B.C. Adedokun, T.G. Oloye, V.A. Faremi
GROWTH PERFORMANCE AND SURVIVAL OF *Clarias gariepinus* LARVAE FED DECAPSULATED *Artemia*, LIVE *Artemia* NAUPLII AND DECAPSULATED LIVE *Artemia*
- 10:00 Justina O. Oshoke**, Bichi Armaya'u, Funmilayo Achina
EFFECT OF STEAMING DURATION OF *Moringa olefera* LEAF ON THE GROWTH AND NUTRIENT UTILIZATION ON *Clarias gariepinus* FINGERLINGS
- 10:20 Christianah O. Olaniyi**, Oladunni Afolabi
PERFORMANCE AND HISTOLOGICAL ALTERATION OF AFRICAN CATFISH *Clarias gariepinus* FED YELLOW CORN WASTE MEAL
- 10:40 Break**
- 11:20 Benjmain Akpoilih**
ESTIMATION OF THE TOTAL, DIGESTIBLE AND AVAILABLE PHOSPHORUS REQUIREMENT IN PRACTICAL DIETS OF JUVENILE *Clarias gariepinus* BASED ON GROWTH, WHOLE BODY AND BONE MINERALIZATION
- 11:40 Johannes Christoffel Swanepoel**, Neill Jurgens Goosen
DETERMINING THE BIOAVAILABILITY OF PHOSPHATE FEED ADDITIVES WITH AFRICAN CATFISH *Clarias gariepinus*
- 12:00 Mathew Ayoola**, Khalid Salie, Lourens De Wet
EVALUATION OF GUT EVACUATION RATE IN AFRICAN CATFISH *Clarias gariepinus* FED BENTONITE CLAY AS FEED ADDITIVE

INFORMATION DISSEMINATION AND NETWORKING

Thursday, June 29 9:00 - 10:40 Meeting Room 1.63

Chair: Will Leschen

- 9:00 Bernadette Tosan Fregene**, Adedoyin Olabisi Olasupo
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN EXTENSION AND ADVISORY SERVICES AMONG FISHERFOLKS AND FISH FARMERS IN ONDO STATE, NIGERIA
- 9:20 Lily Akorfa Keledorme**, Amos Wussah, Schandorf Adu-Bright, Patrick Sakyi
THE IMPACT OF MOBILE TECHNOLOGY BASED EXTENSION SERVICES: THE CASE OF FISH FARMERS IN GHANA
- 9:40 H. Mawaka**, T. Samson
IMPACT OF MARICULTURE INFORMATION DISSEMINATION TO THE LOCAL COASTAL COMMUNITIES IN COASTAL KENYA

SHRIMP GENETICS, BREEDING, HATCHERY AND DISEASE

Thursday, June 29 9:00 - 12:40 Meeting Room 2.64

Chair: Arun Dhar

- 9:00 Polyana da Silva**
THE USE OF A FUNCTIONAL DIET TO INCREASE SURVIVAL OF AHPND INFECTED WHITE LEG SHRIMP *L. vannamei*
- 9:20 Luis F. Aranguren**, Parthapol Piamsomboon, Kathy Tang-Nelson, Siddhartha Kanrar, Arun K. Dhar
ISOLATION OF NOVEL MUTANT STRAINS OF *Vibrio parahaemolyticus* FROM PACIFIC WHITE SHRIMP *Penaeus vannamei* IN LATIN AMERICA THAT CONTAINS AHPND PIR A AND B GENES BUT DOES NOT CAUSE ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND)
- 9:40 Delano D. Schleder**, Martina Blank, Luiz G.B. Peruch, Moisés A. Poli, Karolina V. Rosa, Felipe N. Vieira, Leila Hayashi, Edemar R. Andreatta
SYNERGISTIC EFFECT OF TWO BROWN SEAWEEDS ON PACIFIC WHITE SHRIMP RESISTANCE TO THERMAL SHOCK AND WHITE SPOT DISEASE
- 10:00 Camerson Donald Ghambi**, Kalkulisha Shankar, Prakash Patil, Satish Rama Poojary, Abhiman Ballyaya, Ramesh Srinivasayya
CONCENTRATING WHITE SPOT SYNDROME VIRUS BY SKIM MILK FLOCCULATION FOR DETECTION BY A MONOCLONAL ANTIBODY BASED FLOW-THROUGH ASSAY
- 10:20 Arun K. Dhar**, Krista N. Kaizer, Jonah Rainey, Yelena M. Betz, Valentina C. Ciccarone, Syd Johnson
BACULOVIRUS MEDIATED PRODUCTION OF INFECTIOUS TAURA SYNDROME VIRUS (TSV) OF SHRIMP IN NON-HOST CELLS
- 10:40 Break**

THURSDAY

- 11:20 Hui Jiang**, Tao Huang, Yun Li, Xilin Dai
EVALUATING SALINITY EFFECT ON THE PERFORMACE OF VARIOUS *Penaeus vannamei* FAMILIES
- 11:40 Chris Stock**, Peter Van Wyk, Ramir Lee, Satya Murthy, Diego Flores,
Craig L. Browdy
STRATEGIES FOR THE REPLACEMENT OF *Artemia* NAUPLII IN MARINE SHRIMP
DIETS
- 12:00 Mohamed E. Megahed**
APPLICATION OF THE MICROSATELLITE MARKERS IN THE SHRIMP BREEDING
PROGRAMS
- 12:20 Matthew Owen**, Arun Dhar, Brenda Noble, L. Fernando Aranguren Caro, Loc Tran,
Cesar Molina, Polyana da Silva, Alex Obach
THE USE OF A FUNCTIONAL DIET TO INCREASE SURVIVAL OF AHPND INFECTED
WHITE LEG SHRIMP *L. Vannamei*

EAST / SOUTH AFRICA – REGIONAL OVERVIEW

Thursday, June 29 9:00 - 15:20 Auditorium 2

Chairs: David Miera, Abudala Napuru, Emmanuel Kaunda

- 9:00 David O. Mirera**
STATUS OF MARICULTURE IN KENYA “IMPROVED LIVELIHOOD AND FOOD
SECURITY”
- 9:20 Constantine Ondhoro**, Brian Owoyesigire, Robert Gidoi, Lawrence Owere,
Godfre Kawoya Kabiriza, Gertrude Atukunda, Martin Turyashemererwa,
Jannet Naluwairo, Geoffrey Magezi
PRODUCTIVITY AND PROFITABILITY OF AQUACULTURE ENTERPRISES IN
UGANDA SOUTH EASTERN AGRO-ECOLOGICAL ZONE
- 9:40 Messias Alfredo Macuiane**, Robert E. Hecky, Stephanie J. Guildford
APPLICATION OF $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ ISOTOPES TO TRACE THE USE OF CAGE
AQUACULTURE WASTES BY WILD FISH POPULATIONS IN LAKE MALAWI,
NIASSA, AFRICA
- 10:00 Grant C. Pitcher**, Charles J. Foord, Brett M. Macey, Lisa Mansfield, Anna Mouton,
Stephen J. Osmond, Lynndal van der Molen
HARMFUL ALGAL BLOOMS AND THE SOUTH AFRICAN AQUACULTURE SECTOR:
YESSOTOXINS AND THEIR IMPACTS
- 10:20 Abudala Napuru**
DEVELOPING SMALL SCALE COMMERCIAL AQUACULTURE IN SOUTHERN
MALAWI
- 10:40 Break**
- 11:20 Nicholas P.E. James**
POND TILAPIA AQUACULTURE SUCCESSES IN SOUTHERN AFRICA
- 11:40 Mary Lundeba**, Steven M. Cole, Mary Nyirenda, Noah Muyuni
RESULTS FROM A PARTICIPATORY ACTION RESEARCH FISH FEED TRIAL USING
Oreochromis macrochir AND *Oreochromis tanganicae* IN NORTHERN ZAMBIA

- 12:00 Adrian Piers**
REVIEW OF RECENT DEVELOPMENTS IN AQUACULTURE IN CENTRAL AND SOUTHERN AFRICA, WITH PARTICULAR FOCUS ON THE ZAMBEZI RIVER – ZAMBIA / ZIMBABWE
- 12:40 LUNCH**
- 14:00 Lizande Kellerman**, Luanita Snyman-van der Walt, Pat Morant, Karabo Mashabela, Paul Lochner
NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR AQUACULTURE DEVELOPMENT IN SOUTH AFRICA – A SYNOPSIS OF THE CURRENT MARINE AND FRESHWATER AQUACULTURE ENVIRONMENT AND THE NEED TO PROMOTE SUSTAINABLE GROWTH AND INCENTIVISATION
- 14:20 MD Ghulam Kibria**, Shaft Nengu, Supi Khuting, Bernadette Malala, Keolopile Leipego, Lesetedi Mooketsi
POVERTY ERADICATION THROUGH FRESH WATER AQUACULTURE AND INLAND FISHERIES DEVELOPMENT IN BOTSWANA
- 14:40 Ulf Nermark**
EFFORTS TO DEVELOP THE AQUACULTURE SECTOR IN BOTSWANA
- 15:00 Adam Taylor**, Bryan McCoy
OPPORTUNITIES, CHALLENGES AND REALITIES IN AFRICAN COMMERCIAL AQUACULTURE

INTEGRATED AQUACULTURE AND RECIRCULATING SYSTEMS

Thursday, June 29 9:00 - 17:20 Meeting Room 1.41

Chairs: John Bolton, Jean-Michele Mortillaro

- 9:00 Jeremiah J. Minich**, Qiyun Zhu, Zhenjiang Xu, Amnon Amir, Fernando Vargas, Moses Simwaka, Pieter Dorrestein, Eric Allen, Hastings Zidana, Rob Knight
TILAPIA *Oreochromis shiranus* AND AFRICA CATFISH *Clarias gariepinus* REARED TOGETHER IN PONDS FERTILIZED WITH VARIOUS TYPES OF LIVESTOCK MANURE HAVE STABLE AND UNIQUE MICROBIAL COMMUNITIES, UNAFFECTED BY MANURE TYPE
- 9:20 Julian A. Mamo**, Kyra Hoevenaars, Ephraim Gukelberger, Saadia Bouhadjar, Paw Petersen, Susan Claire Adhiambo, Joyce Okwara, Robert Kinya, Jan Hoinkis, Tamás Bardócz
INTERGRATED AQUACULTURE BASED ON SUSTAINABLE WATER RECIRCULATING SYSTEM FOR THE VICTORIA LAKE BASIN (VICINAQUA)
- 9:40 Jean-Michel Mortillaro**, Tojoharivelo M. Rakotomalala, Diana E. Andria-Mananjara, Anaïs Paradis, Ezra A. Raminoharisoa, Mahery Rakotondrajo, Philippe Martel, Lionel Dabbadie
IMPACT OF IMPROVED SYSTEMS ON RICE AND COMMON CARP *Cyprinus carpio* MULTITROPHIC TROPICAL AQUACULTURE, ANTANANARIVO, MADAGASCAR
- 10:00 Tojoharivelo M. Rakotomalala**, Hugues de Verdal, Elodie Pepey, Modestine Raliniaina, Olivier Mikolasek, Philippe Martel, Norosoa R. Raminosoa, Hajanirina Rakotomanana, Etienne Baras, Jean-Michel Mortillaro
POTENTIAL OF LOCAL ICTHYOPHAGIC FISH SPECIES IN THE OPTIMIZATION OF MULTITROPHIC FISH FARMING SYSTEM IN MADAGASCAR

10:20 Patrícia Moraes-Valenti, Ariel C. Franchini, Gelcirene A. Costa, Wagner C. Valenti, Stefany A. Pereira, Sergio R. Batlouni
THE TECHNICAL FEASIBILITY OF THE TAMBAQUI (*Colossoma macropomum*), AMAZON RIVER PRAWN (*Macrobrachium amazonicum*) and CURIMBATA (*Prochilodus lineatus*), FARMED IN INTEGRATED MULTITROPHIC AQUACULTURE SYSTEMS – IMTA

10:40 Break

11:20 Simon Rukera-Tabaro, Onesimo Mutanga, Jean-Claude Micha
PERFORMANCE AND PROFITABILITY OF AN INTEGRATED AGRICULTURE AQUACULTURE SYSTEM: RABBIT-FISH-RICE SYSTEM IN RWANDA

11:40 Reece Wartenberg, Limin Feng, Jia Jun Wu, Yim Ling Mak, Leo L. Chan, Trevor C. Telfer, Paul K.S. Lam
THE IMPACTS OF SUSPENDED MARICULTURE ON COASTAL ZONES IN CHINA AND THE SCOPE FOR INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA), STARTING WITH THE NOBLE SCALLOP *Chlamys nobilis*

12:00 Wade O. Watanabe, Robert D. Farnell
EXPERIMENTAL EVALUATION OF A HALOPHYTE *Salicornia virginica* FOR BIOMITIGATION OF DISSOLVED NUTRIENTS IN EFFLUENT FROM A RECIRCULATING AQUACULTURE SYSTEM FOR MARINE FINFISH

12:20 John J. Bolton, Mark D. Cyrus, Morgan J. Brand, Brett M. Macey
COMMERCIAL IMTA WORKS: LAND-BASED INTEGRATED AQUACULTURE OF SEAWEEDS WITH MARINE ANIMALS IN SOUTH AFRICA

12:40 LUNCH

14:00 Shepherd Ziteyo, MD Ghulam Kibria
FINANCIING FOR THE ESTABLISHMENT OF SMALL-SCALE INTEGRATED FISH FARM IN BOSTWANA

14:20 Bernadette Tosan Fregene, Emmanuel K. Ajani, Bamidele O. Omitoyin, Adetola Jenyo-Oni
BASELINE SOCIO-ECNOMIC STUDY OF SUSTAINABLE INTEGRATED POND BASED AQUACULTURE WITH RICE AND POULTRY PRODUCTION, NIGERIA

14:40 Veena Soni
NEW DEVELOPMENTS IN RECIRCULATION AQUACULTURE SYSTEMS IN EUROPE: A PERSPECTIVE ON ENVIRONMENTAL SUSTAINABILITY

15:00 Sunil N. Siriwardena, Steven M. Cole, Kazi Ahmed Kabir
RESULTS FROM INTEGRATED RICE-FISH FARMING PILOTS: A POTENTIAL INTEGRATED FARMING SYSTEM IN SIERRA LEONE

15:20 Break

15:40 Abner Tlakula
IS TILAPIA COMMERCIAL FARMING IN A RECIRCULATING AQUACULTURE SYSTEM A VIABLE PROPOSITION FOR THE EMERGING FARMERS (RURAL COMMUNITIES) OF THE VHEMBE DISTRICT OF LIMPOPO?

- 16:00 Patricia Moraes-Valenti**, Gelcirene A. Costa, Sergio R. Batlouni, Wagner C. Valenti
CONTRIBUTION OF NATURAL FEEDING AND INERT DIET FOR AMAZON RIVER PRAWN REARED IN DIFFERENT SYSTEMS USING STABLE ISOTOPE ANALYSIS
- 16:20 Peace Wilfred-Ekprikpo**
COMPARATIVE STUDY OF GROWTH PERFORMANCE OF *Heterobranchus longifilis* REARED WITH TWO ORGANIC FERTILIZERS IN EARTHEN PONDS
- 16:40 Alejandro Rios Galvan**
THE PILOT IMPLEMENTATION OF THE SEAWATER ENERGY AND AGRICULTURE SYSTEM

ECONOMICS AND MANAGEMENT – IAAEM

Thursday, June 29 9:00 - 17:20 Meeting Room 2.61

Chairs: Kwamena Quagraine, Junning Cai

- 9:00 Ramon M. Kourie**, Bryce Fleming
ECONOMICS, SUSTAINABILITY AND RISKS FACTORS ASSOCIATED WITH LARGE SCALE COMMERCIAL TILAPIA CULTURE IN MALAWI: A COMPARISON OF PRODUCTION SYSTEMS
- 9:20 Mary-Jane Thaela-Chimuka**, G. Chuma, T.S. Dlamini, P.K. Chauke
ECONOMIC VIABILITY OF SMALL-SCALE WARM FRESH WATER TILAPIA (*Oreochromis*) FARMING IN LIMPOPO PROVINCE, SOUTH AFRICA
- 9:40 Oludare Akanni Adeogun**
ECONOMIC EFFICIENCY OF FISH FARMING TECHNIQUES IN NIGERIA: ARE FARMERS REALLY EFFICIENT?
- 10:00 Trond Bjorndal**, Amalie Tusvik
ECONOMIC ANALYSES OF LAND BASED FARMING OF SALMON
- 10:20 Junning Cai**, PingSun Leung
AQUACULTURE GROWTH POTENTIAL: PERSPECTIVE FROM SHORT-TERM PROJECTION OF FUTURE FISH DEMAND
- 10:40 Break**
- 11:20 Uttam Deb**, Madan Dey
HOW DOES BRAND AFFECT DEMAND FOR CATFISH? AN ANALYSIS OF STORE-BASED SCANNER DATA IN THE UNITED STATES
- 11:40 Siyanbola Omitoyin**, Olabisi Fawehinmi, Jim-George Okemeisi
DETERMINANTS OF OUTPUT OF SMALL SCALE FISH FARMERS IN IKORODU LOCAL GOVERNMENT AREA, LAGOS STATE
- 12:00 Blessing Mapfumo**
TRADE OF FARMED FISH PRODUCTS FROM SUB-SAHARAN AFRICA
- 12:20 Junning Cai**, Xiao Liang, Weiwei Wang, Nianjun Shen
ASSESSMENT AND MONITORING OF GLOBAL TILAPIA MARKETS
- 12:40 LUNCH**

- 14:00 Arnoud Meijberg**, Trisha Clauson, Sven Genschick, Maureen Nyachwaya
KENYA MARKET-LED AQUACULTURE PROGRAMME, CONSUMERS INSIGHTS
MAKING MARKETS WORK FOR SMALL AND MEDIUM SIZED POND FARMERS
- 14:20 Blessing Mapfumo**
AN OVERVIEW OF MARKETS FOR FARMED FISH PRODUCTS IN SUB-SAHARAN
AFRICA
- 14:40 Valdovinos Pereira**, Frans Swanepoel
MARKETING CHANNELS UTILISED BY TILAPIA PRODUCERS IN SOUTH AFRICA
- 15:00 Mastulah Kawala**, Theodora Shuwu Hyuha, William Ekere, Peter Walekhwa,
Gabriel Elepu, Sloans Chimatiro Kalumba
TO PARTICIPATE IN INFORMAL FISH TRADE OR NOT; THE CASE OF BUSIA
(UGANDA/KENYA) BORDER
- 15:20 Krishen J. Rana**, Victor C. Baah
UPGRADING CAPTURE FISHERIES AND AQUACULTURE – FISH MARKETS AND
FISH PROCESSING IN SOUTH SUDAN

AQUACULTURE BIOSECURITY SPECIAL SESSION

Thursday, June 29 9:00 - 17:20 Roof Terrace Room

Chairs: David Scarfe, Dušan Palić

- 9:00 Andre Vosloo**
AQUATIC ANIMAL HEALTH MONITORING WITHIN THE BIOMARKER FRAMEWORK:
FROM THE THEORETICAL TO THE PRACTICAL
- 9:20 Reginald B. Blaylock**, Jeffrey M. Lotz, Stephen A. Bullard, Cova Arias,
Terry Hanson, Roy P.E. Yanong
FIELD TESTING A NEW DIAGNOSTIC ASSAY FOR *Amyloodinium ocellatum*
- 9:40 Elisa Mwega**, Huruma Tuntufye, Duncan Colquhoun, Stephen Mutoloki,
Robinson Mdegela, Oystein Evensen, Yngvild Wasteson
ISOLATION AND CHARACTERIZATION OF FLAVOBACTERIA FROM NILE TILAPIA
IN TANZANIA
- 10:40 Break**
- 11:20 David L. Straus**, Thomas Meinelt, Dibo Liu, Lars-Flemming Pedersen
USE OF PERACETIC ACID TO DISINFECT WATER: TOXICITY TO FISH
- 11:40 Bukola Okunade**, Zaid Aderolu
THE EFFECTS OF POLLUTION ON FISH HEALTH AND THE MORPHOLOGICAL AND
PHYSIOLOGICAL CHANGES IN FISH
- 12:00 Magdalena Podolska**, Agnieszka Pekala, Katarzyna Nadolna-Aftyn
SKIN ULCERS IN COD *Gadus morhua* FROM THE SOUTHERN BALTIC SEA
- 12:20 Maxwell Barson**, Tadiwa Mutizwa
OCCURRENCE OF TRICHODINID PARASITES OF WILD AND CULTURED
Oreochromis niloticus AND *Coptodon rendalli* IN LAKE KARIBA, ZIMBABWE

12:40 LUNCH

14:00 Shaft Nengu, Supi Khuting, MD Ghulam Kibria, Bernadette Malala, Keolopile Leipego, Lesetedi Mooketsi
AQUATIC ANIMAL HEALTH STATUS IN BOTSWANA

14:20 Isaac R. Mulei, Phillip N. Nyaga, Paul G. Mbuthia, Robert M. Waruiru, Øystein Evensen, Stephen Mutoloki
FIRST DETECTION OF INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS IN FARMED RAINBOW TROUT IN KENYA

14:40 Alvaro R. Sánchez-Arévalo, Ysabel Santos, Nancy Saltos Rosero, Clara Fernández-Álvarez, Cristina Garcia-Diez, Antonio Martínez Sánchez
USEFULNESS OF PHYTOBIOTIC FOR *Saprolegniasis* CONTROL IN FRESHWATER FISH

15:00 Eman Zahran, Elsayed E Hafez, Ferdaus Mohd Altaf Hossain, Mohamed Elhadidy, Adel A. Shaheen
SAPROLEGNIOSIS IN NILE TILAPIA *Oreochromis niloticus*: IDENTIFICATION, MOLECULAR CHARACTERIZATION AND PHYLOGENETIC ANALYSIS OF TWO NOVEL PATHOGENIC *Saprolegnia* spp. STRAINS

15:20 Break

15:40 Nevien Abdelkhalek, Mohamed El-Adl, Mohamed Salama, Ahmed Hafez, Mohamed Hamed, Moustafa Al-Araby
MASS MORTALITIES ASSOCIATED WITH ISOPODA INFESTATION AS A RESULT OF UNCONTROLLED BIOSECURITY MEASURES IN LAKE QARUN, EGYPT

16:00 Sitokozile Sibanda, Davies Pfukenyi, Gift Matope, Maxwell Barson
PRELIMINARY SOCIO-ECONOMIC FINDINGS FROM ASSESSMENT OF THE EPIZOOTIC ULCERATIVE SYNDROME (EUS) DISEASE IN FINFISH IN ZIMBABWE

16:20 Thomas M. Murphy, Jeremiah O'Connell
STUDY TO MAP AQUATIC ANIMAL DISEASES IN NORTH AFRICA

16:40 John Walakira, Nelly Isyagi, Mohamed Seisay, Kevin Christison, Simplicie Nouala
MAPPING STUDY OF AQUATIC ANIMAL DISEASES IN SOUTHERN AFRICA

17:00 Gillian Taylor
ASSESSING THE CURRENT STATUS OF DIAGNOSTIC CAPACITY AND DISEASES OF ECONOMIC CONCERN IN SOUTH AFRICA'S FARMED TILAPIA *Oreochromis* spp.

OYSTERS

Thursday, June 29 11:20 - 12:40 Meeting Room 2.41

Chair: Leila Basti

- 11:20 Gonçalo Murta**, MD Ghulam Kibria
SHELLFISH FARMING IN NAMIBIA: A SUCCESS STORY FROM SOUTHERN AFRICA
- 11:40 David Russell**, MD Ghulam Kibria
OYSTER FARMING IN NAMIBIA: A SUCCESS STORY TO GREATER FOOD SECURITY
- 12:00 Leila Basti**, Ryoji Matsushima, Toshiyuki Suzuki, Satoshi Nagai
OXIDATIVE STRESS IN GILLS AND DIGESTIVE TRACTS OF PACIFIC OYSTER *Crassostrea gigas* AND JAPANESE SCALLOP *Patinopecten yessoensis* CAUSED BY *Dinophysis caudata*
- 12:20 Graham Mair**, Matt Cunningham, Peter Kube, Wayne Hutchinson
THE R&D AND INDUSTRY RESPONSE TO THE SPREAD OF PACIFIC OYSTER MORTALITY SYNDROME (POMS) OUTBREAKS IN AUSTRALIA

AU IBAR AFRICAN AQUACULTURE REGIONAL NETWORKS

Thursday, June 29 9:00 - 17:20 Meeting Room 1.44

TBA

CRAYFISH, CRABS, LOBSTER AND OTHER SPECIES

Thursday, June 29 14:30 - 17:20 Meeting Room 2.64

Chairs: Farshad Shishehchian, Janaina Kimpara

BLUE AQUA

FRESHWATER

- 14:00 Janaina M. Kimpara**, Patrícia M.C. Moraes-Valenti, Carlos Eduardo L.S. Silva
MORPHOTYPES IN MALE CINNAMON RIVER PRAWNS *Macrobrachium acanthurus* (WIEGMANN, 1836)
- 14:20 Daniel C. Njoku**, Chuku Ogueri, Christian N. Anyanwu, Chinyere Chikere-Njoku
CULTURE TRIAL OF THE GIANT FRESHWATER PRAWN *Macrobrachium vollehovenii* (HERKLOTS, 1857) AROUND THE FUTO AXIS OF OTAMIRI RIVER, NIGERIA
- 14:40 Catherine Greengrass**, Peter Britz, Mary-Jane Thaela-Chimuka, Martin Maboko
THE EFFECT OF AVAILABILITY OF SHELTER ON SURVIVAL OF THE FRESHWATER CRAYFISH *Cherax cainii* (MARRON) IN TANK CULTURE

MARINE

- 15:00 Rufaida Dhuhai Al Breiki**, Madjid Delghandi, Gerd Bruss, Shannon R. Kjeldsen, Manal Saif Al Hinai, Hasifah Afzal, Kyall R. Zenger, Mohammed Ali Al Abri, Dean R. Jerry, Abdul Aziz Al Marzouqi
A GENETIC STRUCTURE STUDY OF THE SCALLOPED SPINY LOBSTER *Panulirus homarus* FROM OMAN

15:20 Break

15:40 Kabir Chowdhury, Jjianming Zhu, Chunfang Cai, Yuantu Ye, Jie He
DIETARY PROTEASE IMPROVES NUTRIENT AND ENERGY RETENTION EFFICIENCY
IN CHINESE MITTEN CRAB *Eriocheir chinensis* FED LOW FISH MEAL DIETS IN
LABORATORY CONDITIONS

16:00 Graham Mair, Poppy Stivahartis, Kurniawan Kurniawan, Alistair Scott-Young
FACTORS IMPACTING PURGING SUCCESS IN DESANDING THE AUSTRALIAN PIPI
Donax deltoides

16:20 MayMyat Noe Lwin
DEVELOPMENT OF A FORMULATED – PELLETTED FEED FOR CRAB FARMING

16:40 Mohamed E. Megahed
GENETIC DIVERSITY OF MANILA CLAM *Venerupis philippinarum* POPULATIONS
FROM LAKE TIMSAH REVEALED BY MICROSATELLITES MARKERS

BIOFLOC

Thursday, June 29 14:00 - 17:20 Meeting Room 2.44

Chairs: Yoram Avnimelech, Henk Stander

14:00 Wilson Wasielesky, Hellyjúnior Brandão Pereira, Dionéia Cesar, Carlos Gaona,
Dariano Kruppenauer, Luis Poersch
THE EFFECT OF CARBON:NITROGEN RATE ON HETEROTROPHIC- AND
NITRIFYING BACTERIA COMPOSITION OF BIOFLOC IN *Litopenaeus vannamei*
SUPERINTENSIVE CULTURE

14:20 Bartholomew W. Green, Steven D. Rawles, Kevin K. Schrader, Carl D. Webster,
T. Gibson Gaylord, Matthew E. McEntire
EFFECT OF DIETARY PROTEIN ON HYBRID TILAPIA PRODUCTION IN A BIOFLOC
TECHNOLOGY SYSTEM

14:40 Ramon M. Kourie, Bryce Fleming
LARGE SCALE HIGH-RATE BIOFLOC TANK CULTURE OF TILAPIA IN MALAWI:
FROM INCEPTION TO TECHNICAL SUCCESS

15:00 Yoram Avnimelech, Boriah Suryakumar
VERTICAL SUBSTRATES IN BIOFLOC SYSTEMS: AN INTERMEDIATE INTENSIVE
AQUACULTURE SYSTEM

15:20 Yoram Avnimelech
BIOFLOC TECHNOLOGY: PROVEN AND POTENTIAL ADVANTAGES TOWARD
INTEGRATED AQUACULTURE

THURSDAY

TILAPIA NUTRITION

Thursday, June 29 14:00 - 17:20 Meeting Room 1.61

Chair: Arjen Roem



- 14:00 Arjen Roem**, Kenneth van Lith, Jurre Zaal, Alaa Badr, Saskia Kröckel
NUTRA LIFESTART FOR TILAPIA – A GLOBAL TEAM APPROACH TO TILAPIA STARTER DIETS
- 14:40 Polyana F. da Silva**, Christian Delannoy, Matthew Owen, Diana Urea, Charles McGurk
PROTEC FOR TILAPIA – FISH HEALTH MODULATION THROUGH NUTRITION
- 15:00 Devi Hermesen**, D.B. van de Waal, S.A.J. Declerck, J.A.J. Verreth, M.C.J. Verdegem
NUTRITIOUS POND PROJECT: NEW STEPS IN DEVELOPING A SUSTAINABLE AQUACULTURE PRODUCTION SYSTEM THROUGH DIET FORMULATION
- 15:20 Joseph R. Sullivan**
SOME COMMON THEMES FOR USAID FARMER-TO-FARMER SMALL SCALE AQUACULTURE ASSISTANCE IN SUB-SAHARAN AFRICA: CREATING FISH FEEDS FROM LOCALLY AVAILABLE INGREDIENTS AND FABRICATED EQUIPMENT
- 15:40 Deji Adeoye**, Yemi Akegbejo-Samsons, Simon Davies
UNDER OPTIMUM REARING CONDITION, NILE TILAPIA *Oreochromis niloticus* DOES NOT MARKEDLY BENEFIT FROM COSTLY EXOGENOUS ENZYME SUPPLEMENTATION
- 16:00 Ramon M. Kourie**, Bryce Fleming
PRACTICAL DAILY FEED ALLOTMENT ESTIMATES IN THE CULTURE OF FERAL TILAPIA SPECIES *Oreochromis shiranus* AND *Oreochromis mossambicus* UNDER LARGE SCALE HIGH-RATE BIOFLOC TANK CULTURE CONDITIONS IN MALAWI
- 16:20 Imani Kapinga**, Samwel M. Limbu, Rashid A. Tamatamah, Nazael A. Madalla, Wahabu H. Kimaro
REPRODUCTIVE PERFORMANCE AND SEX RATIO OF NILE TILAPIA *Oreochromis niloticus* FED DIETARY *Aspilia mossambicensis* AND *Azadirachta indica* LEAF MEAL
- 16:40 Kenan Engin**, Hatice A. Yılmaz, Orhan T. Eroldoğan, Arzu Ö. Hunt, Ferbal Ö. Yılmaz, Mehmet Berköz, Ilgin Özşahinoğlu, Pinar Mumoğullarında, Almıla Uysal, Serap Yalin, Mustafa Yildiz
THE EFFECTS OF DIETARY FISH OIL REPLACEMENT BY PLANT OILS ON THE GROWTH, WHOLE BODY AND TISSUE FATTY ACID AND NUTRIENT COMPOSITION AND DIGESTIVE ENZYME ACTIVITIES IN NILE TILAPIA *Oreochromis niloticus* L.
- 17:00 Priscilla A. Obirikorang**, Benjamin B. Campion, Regina Edziyie, Daniel Adjei-Boateng
FISHMEAL REPLACEMENT WITH OILSEED MEALS: EFFECT ON PHYSICAL CHARACTERISTICS OF PELLETTED DIETS AND WASTE OUTPUT FROM NILE TILAPIA *Oreochromis niloticus*

THURSDAY

MOLLUSC CONTRIBUTED

Thursday, June 29 14:00 - 17:20 Meeting Room 2.41

Chair: Doris Oliva

- 14:00 Aduabobo Hart**, Nene Jamabo, Chris Davies
MINERAL CONTENTS EVALUATION OF SOME SHELLFISHES FROM BUGUMA CREEK, RIVERS STATE, NIGERIA
- 14:20 Doris Oliva**, Alejandro Abarca, Elisa Pacheco, Alberto Reyes, Claudia Cubillos, Daniel Arriagada, Vladimir Murillo, Heraldo Contreras, Camila Barria, L. René Durán
GAPS IN THE TECHNOLOGY DEVELOPMENT FOR THE CULTURE OF SIX NATIVE BURROWING BIVALVES OF COMMERCIAL INTEREST IN CHILE
- 14:40 Eman El-Wazzan**, Atif Salah, Mark Dimech
HEAVY METALS ASSESSMENT IN THE STRIPED VENUS CLAM *Chamelea gallina* IN EGYPTIAN FISHERIES AS POTENTIAL CANDIDATE FOR EXPLOITATION AND AQUACULTURE

GENDER

Thursday, June 29 14:00 - 17:20 Meeting Room 1.63

Chairs: Chika F. Ikeogu, Shahroz Mahean Haque

- 14:00 Chika F. Ikeogu**, Hannah F. David
GENDER ROLE IN THE CONSTRUCTION AND OPERATION OF TRADITIONAL FISHING GEARS IN ANAMBRA STATE NIGERIA
- 14:20 Rikalize Reinecke**
INSPIRED BY A DOLPHIN TO BECOME ONE OF THE BIGGEST COMMERCIAL AQUACULTURE FARMERS IN SOUTH AFRICA, ONLY AT THE AGE OF 15YEARS. YOUNG WOMEN IN ACTION TO MAKE A DIFFERENCE IN FOOD PRODUCTION AND SUSTAINABILITY
- 14:40 Hillary Egna**, Jevin West, Morgan Chow
ASSESSING THE AUTHORSHIP GENDER GAP IN AQUACULTURE-RELATED PUBLICATIONS
- 15:00 Judith M. Amadiva**, Charles C. Ngugi, Nancy Gitonga, Hillary Egna
KENYA WOMEN IN FISH FARMING AND MARKETING – MODERN PERSPECTVES

STUDENT “R” WORKSHOP

Thursday, June 29 14:00 - 17:30 Meeting Room 1.43

Chair: Morgan Brand

THE USE OF R, RSTUDIO, AND GITHUB

This demonstration will introduce R, RStudio and Github which will allow you to begin transparent reporting and analysis in a reproducible and readable manner. Goals will include: demonstration of RStudio for basic statistics and plotting, the use of dynamic notebooks as organizational tools, and a demo of the collaborative functions of GitHub.

1. N. Isyagi, M. Seisay, S. Noaula, O. Anozie and H. Moepi, AU-IBAR
AN OVERVIEW OF THE STRATEGIES AND AGENDA FOR PROMOTING SUSTAINABLE AQUACULTURE DEVELOPMENT ON THE CONTINENT

A significant number of Africa's countries heavily depend on fish as sources of animal protein and revenue. The rate of population growth is placing serious demand on the available fish supplies, which by account has become stagnant during the last decade. Current estimates are stating that most commercially exploited wild fish populations are either overexploited or fully exploited. Africa has an estimated population of 1.6 billion people. The continent's current food fish supply is estimated at about 9 kg per capita per annum while the global average has risen to approximately 20 kg per capita per annum. The likelihood that capture fishery production can significantly be increased over the next 20 years to meet demand is low because most of the commercially important fish stocks are reported to be fully exploited or overexploited. It is not a surprise therefore that over past five years Africa has become a net importer of fish. Aquaculture currently provides the most sustainable option for the continent to expand its fish production. However, despite growth in the sector, African aquaculture only contributes to 2% of global aquaculture production.

The Joint Conference of Africa ministers of agriculture, rural development and fisheries and aquaculture in 2014 recognized the potential of the aquaculture sector to generate wealth, social benefits and contribute to the development of the African economy and contribute to global Sustainable Development Goals. The Policy Reform Strategy for Fisheries and Aquaculture (PFRS), aims to create this transformation in aquaculture through facilitating the conditions for market-led sector development. Several challenges need to be overcome if the continent is to meet its benchmarks for sustainable commercial aquaculture development. This paper discusses at continental level the actions currently being undertaken to support the appropriate policy reforms for sustainable commercial aquaculture development on the continent.

2. N. Isyagi, M. Seisay, S. Noaula, O. Anozie and H. Moepi, AU-IBAR
A SYNTHESIS OF REGIONAL ENVIRONMENTAL ISSUES AND APPROACHES FOR SUSTAINABLE ENVIRONMENTAL MANAGEMENT TO SUPPORT SUSTAINABLE COMMERCIAL AQUACULTURE DEVELOPMENT IN AFRICA. B

Aquatic ecosystems provide several goods and services including fisheries and aquaculture production. Aquatic ecosystems are also the ultimate recipients of pollution from human activity, including from aquatic production practices, industrial and municipal activities. Aquatic production systems too can have significant environmental and social adverse impacts. The productivity of aquatic production systems, aquaculture notwithstanding, depends on the status of aquatic resources, environmental pollution and habitat degradation. Aquatic resources are generally considered renewable. However, even while this might be so, they are not infinite. They need to be properly managed if their contribution to nutrition, economic and social well-being of the growing world's population is to be sustained.

The Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) advocates for the sustainable management and conservation of aquatic resources to ensure sustainable fisheries and aquaculture development. The FAO Code of Conduct for Responsible Fisheries encompasses this approach. The paradigm of this is enshrined in the ecosystem approach to aquaculture. The ecosystem approach to aquaculture (EAA) is a strategy for the integration of the aquaculture within the wider ecosystem so as to ensure sustainable development, equity and resilience of interlinked social-ecological systems. In line with these, several African Member states require that environmental impact assessments are part of the requirements for approval of large commercial aquaculture projects. However, it is the continent's overall objective and the objective Member States to expand commercial aquaculture to the level whereby aquaculture becomes a major contributor to fish production, source a

For sustainable aquaculture development at this level, there is need to develop and implement strategic sectoral environment management approaches that do not just focus at the farm but also factor in the wider environment. This is necessary because in practice, aquaculture is dependent upon the entire ecosystem. For example, at geographical level, a cluster of farms that share a common waterbody or watershed need coordinated management. Exotic fish that escape from fish farms have impacts across the entire watershed; so do the external drivers of aquaculture such as population growth and development, trade and climate change. Watershed boundaries, trade and climate change transcend national boundaries.

Sustainable aquaculture development founded transboundary initiatives that are coherent supporting the sustainable use of aquatic resources coupled with climate change adaptation. Such an approach will enable member states make more realistic and appropriate aquaculture development plans, approve appropriate projects and institute environmental management assessments more effectively.

3. N. Isyagi, M. Seisay, S. Noaula, O. Anozie and H. Moepe, AU-IBAR THE CONTINENTAL OVERVIEW AND APPROACHES FOR AQUATIC ANIMAL DISEASE CONTROL

The Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa seek to create the enabling conditions for increased the sector's contribution to food and nutrition security, livelihoods and economic growth in Africa. To this end AU-IBAR, in collaboration with the NEPAD Agency and with support from EU, is implementing the Fisheries governance Project whose aim is to improving the institutional and policy environment for sustainable management and utilization of fisheries and aquaculture resources in Africa as among the avenues for achieving the sectoral continental objectives.

Attaining these goals entails increasing levels of production and improving access of fish produce and products to market. The success of this hinges upon the production systems employed and ensuring that environmental, food quality and safety issues are addressed. The status of aquatic animal health and therefore the control and surveillance of fish diseases is among the most important determinants for productivity, viability, environmental biosecurity, food safety and quality from the fishery and commercial aquaculture production systems. Consequently, one of the cardinal activities identified for sustainable aquaculture development and the transformation of the fisheries is enhancing capacities for Fisheries diseases surveillance and control, timely collection, analysis and sharing of accurate sanitary information by strengthening the capacity of National veterinary services for early detection, timely notification/reporting, prevention and control of fish diseases.

Currently however, the capacity for aquatic animal veterinary services for fish diseases identification, surveillance and control in most AU member states is grossly inadequate. The benefits of maintaining the upper-hand over disease conditions through effective aquatic animal disease control are obvious, notably prevention of serious obligate diseases and/or the importation of exotic diseases, increased farm production and efficiency, access to markets (quality assurance and certification) and economic benefits (to the producer, community and nation).

Consequently one of the major activities under the result Institutional capacity and regulatory frameworks for sustainable fisheries management of the Fisheries Governance Project is enhancing capacities for fish diseases surveillance and control, timely collection, analysis and sharing of accurate sanitary information on the continent. This has involved undertaking disease mapping studies to obtain a baseline of the status quo for both endemic and notifiable diseases, training for fisheries and veterinary managers, development of regional disease control frameworks and aquatic animal health networks. This presentation gives and overview of these actions and their prospective benefits.

FRIDAY, June 30

SEA URCHINS

Friday, June 30 9:00 - 12:30 Meeting Room 1.63

Chairs: Mark Cyrus, David Cohen

- 9:00 Panagiotis (Panos) A. Pantazis**
ECHINOCULTURE IN GREECE: PRESENT STATUS AND PERSPECTIVES
- 9:20 Benjamin Mos**, Maria Byrne, Symon A. Dworjanyn
BIOGENIC ACIDIFICATION REDUCES SEA URCHIN GONAD GROWTH AND INCREASES THE SUSCEPTIBILITY OF AQUACULTURE TO OCEAN ACIDIFICATION
- 9:40 Colin Hannon**, Rick A. Officer, John Chamberlain, Jean Le Dorven
THE APPLICATION OF *Ulvella lens* TO THE EUROPEAN SEA URCHIN INDUSTRY
- 10:00 John M. Lawrence**
CONFLICT BETWEEN SOMATIC AND GONADAL GROWTH IN SEA URCHINS: IMPLICATIONS FOR AQUACULTURE
- 10:20 Mark D. Cyrus**, John J. Bolton, Donia Wozniak, Brett M. Macey
SETTLEMENT, METAMORPHOSIS AND POST-SETTLEMENT SURVIVAL OF THE SEA URCHIN *Tripneustes gratilla* FOR AQUACULTURE PRODUCTION
- 10:40 Break**
- 11:10 Lekraj Etwarising**, John J. Bolton, Denzil R. Beukes, Brett M. Macey, Mark D. Cyrus
FEED STIMULANTS FROM GREEN ALGA *Ulva* FOR SEA URCHIN *Tripneustes gratilla*
- 11:30 David L. Cohen**
HATCHERY PRODUCTION OF *Tripneustes gratilla* FOR SEAWEED BIOCONTROL AND CORAL REEF CONSERVATION

AQUACULTURE CONTRIBUTED

Friday, June 30 9:00 - 12:30 Meeting Room 2.44

Chair: Ghulam Kibra

- 9:00 Junning Cai**, Xue Yan, Xiaowei Zhou
ASSESSMENT AND MONITORING OF SPECIES DIVERSIFICATION IN GLOBAL AQUACULTURE
- 9:20 Adiaha Ugwumba**, Daniel Akhidenor, Alex Ugwumba
THE RATE OF GROWTH AND PRODUCTION OF THE EARTHWORM *Alma millsoni* FROM CELLULOSE AND SOIL SUBSTRATES
- 9:40 Maroko Mokaya**, Alphine Mboga, Kennedy Kala, Gabriel Akoko
TOWARDS OPTIMIZATION OF WIND HYBRID SOLAR RENEWABLE ENERGY POTENTIAL ASSESSMENT AS AN ENGINE FOR SUSTAINABLE DEVELOPMENT IN KENYA
- 10:00 David Drew**, Jason Drew
THE STORY OF THE FLY AND HOW IT COULD SAVE THE WORLD
- 10:20 Juan Pablo Lazo**
THE STATUS OF MARINE FISH CULTURE IN MEXICO AND FUTURE TRENDS
- 10:40 Luís André Sampaio**, Ricardo Vieira Rodrigues, Marcelo Borges Tesser, Marcelo Hideo Okamoto
REPRODUCTION, LARVICULTURE AND NURSERY OF BRAZILIAN FLOUNDER *Paralichthys orbignyanus*: A REVIEW OF CURRENT TECHNIQUES

AQUACULTURE BIOSECURITY SPECIAL SESSION – CONTINUED

Friday, June 30 9:00 - 17:20 Roof Terrace Room

Chairs: David Scarfe, Dušan Palić

- 9:00 James A. Roth**
EVOLVING APPROACH TO BIOSECURITY IN THE U.S. POULTRY AND LIVESTOCK INDUSTRIES
- 9:20 Randall Brummett**
ECONOMIC IMPACTS OF INFECTIOUS DISEASE ON AQUACULTURE DEVELOPMENT
- 10:00 A. David Scarfe**
GLOBAL EDUCATION EFFORTS TO ENSURE AN AQUATIC VETERINARY WORKFORCE TO ASSIST AQUACULTURE BIOSECURITY
- 10:40 Break**
- 11:10 Stian Johnsen**, Maxwell Barson
OIE'S APPROACH TO AQUACULTURE BIOSECURITY

- 11:50 A. David Scarfe**
IMPLEMENTING PRACTICAL BIOSECURITY THAT MEETS OIE STANDARDS AND REGULATIONS FOR CONTAGIOUS DISEASES PREVENTION, CONTROL AND ERADICATION – AN OVERVIEW
- 12:30 LUNCH**
- 14:00 Dušan Palić**
IDENTIFYING DISEASE HAZARDS AND DETERMINING RISKS AND IMPACTS OF DISEASE ON AN AQUACULTURE OPERATION
- 14:20 Grace Karreman**, Kim Klotins, Andrea Osborn, Julie Bebak, Lori Gustafson, Myron Kebus, Ashwani Tiwari, Paul Innes
DETERMINATION AND MITIGATION OF RISKS OF DISEASE PATHOGEN/INTRODUCTION INTO AQUATIC ANIMAL FACILITIES: CASE SCENARIO
- 14:40 Ian A. Gardner**
THE ROLE OF DIAGNOSTIC LABORATORIES AND DIAGNOSTIC TESTS IN AQUACULTURE DISEASE SURVEILLANCE
- 15:00 K. Larry Hammell**, Charles Caraguel, Ian Gardner
DETERMINING DISEASE PRESENCE/ABSENCE THROUGH DIAGNOSTIC TESTING, SURVEILLANCE AND MONITORING
- 15:20 Lori Gustafson**
INTEGRATING EXPERT JUDGMENT IN VETERINARY EPIDEMIOLOGY: EXAMPLE GUIDANCE FOR DISEASE FREEDOM SURVEILLANCE
- 15:40 Break**
- 16:00 Kathleen H. Hartman**
THE U.S. APPROACH FOR DEVELOPING COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS)
- 16:20 David Huchzermeyer**, Philippa Colly
PRACTICAL IMPLEMENTATION OF INTERNATIONAL AQUACULTURE BIOSECURITY PRINCIPLES
- 17:00 Dušan Palić**, A. David Scarfe
AUDITING, ASSURING AND CERTIFYING DISEASE FREEDOM

WORLD FISH SADC POLICY SESSION
Friday, June 30 9:00 - 17:20 Auditorium 2
Chair: Toby Johnson



African Aquaculture Policy Day

Keynote presentations will set the scene for a high-level panel discussion featuring government representatives and other stakeholders that will discuss how to mainstream fisheries and aquaculture in national agricultural investment plans so as to expedite the sector's growth and contribution to the economic growth of states as well as bolster continent wide food and nutrition security.

8:30 Opening Ceremony

Dr. Sloans Chimatiro, WorldFish, Country Director
ZAMBIA AND TANZANIA OBJECTIVES OF THE AFRICAN AQUACULTURE POLICY DAY

Dr. Motseki Hlatshwayo, Technical Advisor- Fisheries Food Agriculture and Natural Resources, SADC Secretariat
REMARKS ON BEHALF OF SADC SECRETARIAT

Minister TBA
OPENING SPEECH

9:00 Dr. Mike Phillips, Director of Aquaculture and Fisheries Science
Keynote presentation: THE WAYS FORWARD TOWARDS ACHIEVING SUSTAINABLE GROWTH OF AQUACULTURE IN AFRICA: LESSONS FROM WORLD FISH'S EXPERIENCE

9:45 David Shearer, Director, International Partnerships, WorldFish
Introduction of the panel discussions: REPRESENTATIVES OF AFRICAN GOVERNMENTS, AND OTHER HIGH-LEVEL STAKEHOLDERS

10:00 Break

10:20 Panel discussion – Moderated by David Shearer

12:20 Summary and policy highlights – Dr. Sloans Chimatiro

13:00 Closing – Dr. Motseki Hlatshwayo

FRIDAY

GENERAL NUTRITION AND FEEDS – CONTINUED

Friday, June 30 9:00 - 12:30 Meeting Room 2.61

Chairs: Lourens De Wet, Ron Hardy, Julius Manyala

- 9:00 Mariska R. Laubscher**, Gert Marais, Karin Jacobs
THE OCCURRENCE OF *Fusarium* SPECIES AND THEIR MYCOTOXINS IN SOUTH AFRICAN ABALONE FEED
- 9:20 Dilawar Hussain**, Abdul Mateen, Delbert M. Gatlin III
ALLEVIATION OF AFLATOXIN B1 (AFB1) TOXICITY BY CALCIUM BENTONITE CLAY: EFFECTS ON GROWTH PERFORMANCE, CONDITION INDICES AND BIOACCUMULATION OF AFB1 RESIDUES IN NILE TILAPIA *Oreochromis niloticus*
- 9:40 Afamdi Anene**, Geraldine A. Uche
INVESTIGATIONS ON QUANTITY AND PROXIMATE QUALITY OF MAGGOTS PRODUCED FROM TWO SUBSTRATES (CATTLE BLOOD AND POULTRY DROPPINGS) CONTAINING VARYING LEVELS OF SAWDUST
- 10:00 Han Liu**, Fan-Bin Zhan, Heng-Xin Ye, Ji-Feng Wang, Li-Qin Zhang, Wei-Min Wang
YEAST CULTURE DIETARY SUPPLEMENTATION MODULATED GUT MICROBIOTA AND IMPROVED GROWTH OF GRASS CARP *Ctenopharyngodon idella*
- 10:20 Sungchul C. Bai**, Mohammad Moniruzzaman, Jin-Hyeok Lee, Seunghan Lee
A REVIEW ON THE EFFECTS OF DIETARY ANTIOXIDANTS ON REDUCING MERCURY TOXICITY IN MARINE FISH AND IN MICE MODELS
- 10:40 Erhowose E. Omovohwovie**, Eguono S. Osaide, Blessing C. Okogbue
EFFECT OF DIETARY TREATMENT ON THE HEMATOLOGY OF CATFISH *Clarias gariepinus* FINGERLINGS

GENETICS

Friday, June 30 9:00 - 17:20 Meeting Room 1.61

Chairs: Rouvay Roodt, John (Zhanjiang) Liu

- 9:00 Zhanjiang Liu**
GENOMICS AND ITS APPLICATIONS IN AQUACULTURE
- 9:40 Elena N. Kashinskaya**, Karl B. Andree, Evgeniy P. Simonov, Mikhail M. Solovyev
DNA EXTRACTION PROTOCOLS MAY INFLUENCE BIODIVERSITY DETECTED IN THE INTESTINAL MICROBIOME: A CASE STUDY FROM WILD PRUSSIAN CARP *Carassius gibelio*
- 10:00 Clint Rhode**, Stephan F. Jenkins
PARENTAGE ANALYSIS AND GENETIC DIVERSITY IN A COMMERCIAL DUSKY KOB *Argyrosomus japonicus* POPULATION
- 10:20 Dorota Fopp-Bayat**, Konrad Ocalewicz, Marcin Kucinski, Malgorzata Jankun, Beata Laczynska
DIVERSITY IN PLOIDY LEVEL OF GYNOGENETIC PROGENY OF STERLET *Acipenser ruthenus* L.
- 10:40 Break**

- 11:10 Kassaye Balkew Workagegn**, Gunnar Klelemetsedal, Elias Dadebo,
Hans Magnus Gjoen
ESTIMATES OF ADDITIVE AND NON-ADDITIVE GENETIC EFFECTS FOR HARVEST
BODY WEIGHT OF A COMPLETE DIALLEL CROSS OF THREE NILE TILAPIA
Oreochromis niloticus STRAINS
- 11:30 Kassaye Balkew Workagegn**, Gunnar Klemetsedal, Elias Dadebo,
Hans Magnus Gjoen
REALIZED GENETIC GAIN FOR HARVEST BODY WEIGHT IN THE F₂ GENERATION
OF A NILE TILAPIA BREEDING PROGRAM
- 11:50 Gifty Anane-Taabeah**, Emmanuel A. Frimpong, Eric Hallerman, Steve Amisah,
Akwas Ampofo-Yeboah
NILE TILAPIA *Oreochromis niloticus* POPULATION GENETIC STUDIES WITHIN THE
VOLTA RIVER BASIN: APPLICATION IN AQUACULTURE DEVELOPMENT IN GHANA
- 12:10 Kolawole M. Akinoshun**, Dannie Brink, Bekezela Dube
EFFECTS OF INTENSE INBREEDING ON GROWTH TRAITS IN TILAPIA *Oreochromis
mossambicus*
- 12:30 LUNCH**
- 14:00 Olusola Ekundayo**, Emmanuel Ajani
EVALUATING THE EFFECTS OF METHANOL-EXTRACTED *Basella alba* ON THE
MASCULINIZATION OF NILE TILAPIA *Oreochromis niloticus*
- 14:20 Eduardo A. Sanches**, Thiago W. Carmargo, Cleber I. Mikio,
Domingos G. Garrone Neto
SPERM MOTILITY PARAMETERS OF FAT SNOOK *Centropomus parallelus* OF
SEMEN CONTAMINATED WITH URINE
- 14:40 Omowumi I. Binyotubo**, Helet Lambrechts, Danie Brink
THE POTENTIAL INFLUENCE OF GENOTYPE X ENVIRONMENT INTERACTION ON
THE PERFORMANCE OF FOUR NILE TILAPIA *Oreochromis niloticus* L. STRAINS
UNDER DIFFERENT NUTRITIONAL REGIMES
- 15:00 Krishen J. Rana**, Mohamed R. Hasan
PRAGMATIC PROGRAMME FOR NATIONAL BROODSTOCK MANAGEMENT AND
SELECTION FOR INDIAN MAJOR CARPS IN BANGLADESH
- 15:20 Jose Vilanculo**
GENETIC ENHANCEMENT PROGRAM OF THE *Oreochromis mossambicus* AT
CEPAQ
- 15:40 Mohamed E. Megahed**
ANALYSIS OF THE GENETIC STRUCTURE OF MULLET *Mugil cephalus* ALONG THE
MEDITERRANEAN COAST OF EGYPT USING MICROSATELLITES DNA MARKERS

AQUAFISH

Friday, June 30 9:00 - 17:20 Meeting Room 2.41

Chairs: Hillary Egna, Steve Amisha

- 9:00 Russell J. Borski**, Scott Salger, David Baltzegar, Jimi Reza, Md. Abdul Wahab
NUTRITIONAL CONTROL OF GROWTH, GUT MICROBIOME, AND INTESTINAL
NUTRIENT TRANSPORTERS IN NILE TILAPIA
- 9:20 Nazael A. Madalla**, Tausi Ally, Sebastian W. Chenyambuga
EARTHWORM MEAL AS PROTEIN SOURCE IN NILE TILAPIA DIETS
- 9:40 Charles C. Ngugi**, Hillary Egna, Elijah O. Okoth, Julius O. Manyala
GROWTH, YIELDS AND ECONOMIC BENEFIT OF NILE TILAPIA *Oreochromis
niloticus* FED DIETS FORMULATED FROM LOCAL INGREDIENTS IN CAGES
- 10:00 Julius O. Manyala**, Elizabeth Obado, Josiah Ani, Charles Ngugi, Kevin Fitzsimmons
THE EFFECT OF COMMERCIAL AND EXPERIMENTAL DIETS ON GROWTH
PERFORMANCE OF *Oreochromis niloticus* L. FINGERLINGS REARED IN HAPAS IN
UASIN GISHU COUNTY, KENYA
- 10:20 Regina E. Edziyie**, Abigail T. Abachie, Kwasi A. Obirikorang, Daniel Adjei-Boateng,
Emmanuel A. Frimpong
GROWTH AND SURVIVAL OF NILE TILAPIA UNDER NURSERY CONDITIONS
- 10:40 Break**
- 10:40 Julius O. Manyala, Ani Josiah**, Kevin Fitzsimmons, Charles Ngugi
DEVELOPMENT OF LOW COST AQUAPONIC SYSTEM IN KENYA
- 11:10 Sebastian W. Chenyambuga**, Nazael A. Madalla
CONTRIBUTION OF SMALL-SCALE AQUACULTURE TO RURAL LIVELIHOODS IN
TANZANIA
- 11:30 John Walakira**, Mary Njeri, Morris Agaba, Joyce Njuguna, Joshua Amimo,
Rawlynce Bett, Stephen Opiyo
SINGLE NUCLEOTIDE POLYMORPHISMS DISCOVERY IN THE TRANSCRIPTOME
OF MARBLED LUNGFISH *Protopterus aethiopicus* BY NEXT GENERATION
SEQUENCING: GUIDING BREEDING TECHNOLOGY
- 11:50 James Bundi Mugo**, Charles C. Ngugi
COMPARATIVE GROWTH PERFORMANCE OF *Oreochromis niloticus*, *Clarias
gariepinus* AND *Cyprinus carpio* AT A HIGH ALTITUDE ENVIRONMENT
- 12:10 Anthony M. Mwangi**, James Jumbe, Charles C. Ngugi
EFFECTS OF FREQUENCY OF GRADING ON THE GROWTH, INTRA-COHORT
CANNIBALISM AND ECONOMIC BENEFITS OF AFRICAN CATFISH *Clarias gariepinus*
(BURCHELL, 1822) CULTURE
- 12:30 LUNCH**
- 14:00 Khandaker Anisul Huq**, Wasim Sabbir, Shikder Saiful Islam, Joyanta Bir,
Shahroz Mahean Haque, M. A. Wahab, Russell Borski
POLYCULTURE STRATEGIES WITH MOLA PRAWN AND CARP TO INCREASE
HOUSEHOLD NUTRITION FOR RURAL FARMER

- 14:20 Shahroz Mahean Haque**, Moon Dutta, Imrul Kaiser, Mahbub Alam, Hillary Egna, Russell Borski
SEMI-INTENSIVE POLYCULTURE OF CLIMBING PERCH WITH INDIAN CARPS
- 14:40 James O. Bukenya**, Kelvin Lule, Moureen Matuha, Theodora Hyuha, Joseph Molnar
UNDERSTANDING SEASONAL PRICE VARIATIONS IN THE AQUACULTURE SECTOR IN UGANDA
- 15:00 Zech Halasi Gidongo**, Theodora Hyuha, Hillary Egna, Joseph Molnar, William Ekere, Gabriel Elepu, Peter Walekhwa, Chimatiro Sloans Kalumba
CONSUMER PREFERENCES AND CONSUMPTION PATTERNS FOR FISH IN UGANDA
- 15:20 Narriman Jiddawi**, Maria Haws
WOMEN INVOLVEMENT IN COASTAL ACTIVITIES AND COMMUNITY BASED MARICULTURE IN ZANZIBAR, TANZANIA
- 15:40 Diana Asero**, Theodora Hyuha, Hillary Egna, Sloans Chimatiro Kalumba, Joe Molnar, William Ekere
ANALYSIS OF FISH TRADE IN EASTERN CORRIDOR: THE CASE OF CENTRAL UGANDA
- 16:00 Joseph J. Molnar**, Isaac Omiat, Moureen Matuha, Gertrude Atukunda, John Walakira, Theodora Huhya, James Bukenya, Claude Boyd, Shamim Naigaga
IMPLEMENTING A MOBILE-BASED APPLICATION FOR MARKETING AND TECHNICAL SUPPORT: DEVELOPING A SUSTAINABLE SYSTEM FOR FISH FARMERS IN UGANDA
- 16:20 Akua Akuffo**, Kwamena Quagraine
AQUACULTURE AND FOOD SECURITY: AN ASSESSMENT OF FISH FARMING HOUSEHOLDS IN GHANA
- 16:40 Akua Akuffo**, Kwamena Quagraine
A LATENT-CLASS ANALYSIS OF HOUSEHOLD DEMAND FOR SEAFOOD IN GHANA
- 17:00 Theodora Hyuha Shuwu**, Joe Molnar, Hillary Egna, William Ekere, Zech Halasi Gidongo
MARKETING STRATEGY OF FARMED FISH IN CENTRAL UGANDA

FINFISH CONTRIBUTED

Friday, June 30 14:00 - 17:20 Meeting Room 2.44

Chair: John Ghulam Kibra

MARINE AND BRACKISH WATER

- 14:00 Angela Chien**, Ralph Kirby, Shyn-Shin Sheen
THE IMPLICATIONS TO AQUACULTURE OF *Mugil cephalus* DIVERSITY IN TAIWAN WATERS
- 14:20 Thumronk Amornsakun**, Ponpanom Promkaew, Anuar Hassan
POTENTIAL OF CLIMBING PERCH *Anabas testudineus* CULTURE AT BRACKISH WATER AREA
- 14:40 Weerakit Joerakate**, Suthajaree Yenmak, Wansuk Senanan, Suriyan Tunkijjanukij, Skorn Koonawootritriron, Supawadee Poompuang
STRAIN EVALUATION OF THAI ASIAN SEABASS *Lates calcarifer* (BLOCH, 1790): GROWTH AND GENETIC DIVERSITY
- 15:00 Alvin N. Setiawan**, Steve Pether, Stephen Pope, David McQueen, Chris Ensor, Stephanie B. Haresnape, Carly Wilson, Glen Irvine
EXPERIMENTAL EVIDENCE OF ROBUST TOLERANCE OF JUVENILE YELLOWTAIL KINGFISH *Seriola lalandi* TOWARDS PROLONGED ELEVATED CO₂ AND LOW PH IN GROWTH AND FOOD CONVERSION
- 15:20 Velmurugu Puvanendran**, Atle Mortensen, Øyvind J. Hansen
SHORT AND LONG-TERM EFFECTS OF EARLY AND LATE WEANING ON ATLANTIC COD *Gadus morhua*
- 15:40 Break**
- 16:00 Velmurugu Puvanendran**, Atle Mortensen, Ingrid Lein, Rama Banger, Anders Thorsen
FAMILY DIFFERENCES ON SEXUAL MATURATION AND ITS CONTRIBUTION TO PERFORMANCE OF ATLANTIC COD *Gadus morhua*
- 16:20 Thiago Raggi**, Albert G.J. Tacon, Daniel Lemos
FEEDING AND NUTRITION OF JUVENILE COBIA *Rachycentron canadum*: EVALUATION OF PRACTICAL FEEDS IN FLOATING NET CAGES, COMPARISON OF DIFFERENT DIETARY FISHMEAL REPLACERS WITHIN INDOOR TANKS, AND ESTIMATION OF ESSENTIAL AMINO ACID REQUIREMENTS
- 16:40 Pedro Pousão-Ferreira**, Laura Ribeiro, Florbela Soares, Ana Gandeias Mendes, Marisa Barata, Sara Castanho, Hugo Quental Ferreira, Ana Catarina Matias, Cátia Marques, Márcio Moreira, Ravi Araújo, João Araújo, Maria Emilia Cunha
AQUACULTURE RESEARCH IN SOUTHERN EUROPE: TRADITIONAL AND EMERGING MARINE FISH SPECIES

NOTES