



AQD Matters

Newsletter of the SEAFDEC Aquaculture Department (AQD), Tigbauan, Iloilo, Philippines



Greetings from the Management

PHOTO BY JM DELA CRUZ



*Christmas is here with us once again. The time of the year that every Christian is waiting for. The time of the year when everyone is joyful and merry because we celebrate the birth of Jesus Christ. As reflected in this year's theme for Christmas celebration in the Department, **Christmas at SEAFDEC/AQD: A season of sharing, a season of thanksgiving**, it is indeed time to reflect and be thankful to the Lord for all the blessings we received – our jobs, our families, our loved ones, our friends, our colleagues, the gifts of good health and good relationships with people around us, and a time to share. By sharing whatever little resources we have especially to those who are mostly in need, we give true meaning to our celebration of Christmas. Let us all be generous and make our less fortunate brothers and sisters happy during this time of the year.*

Merry Christmas and a Prosperous New Year to all!

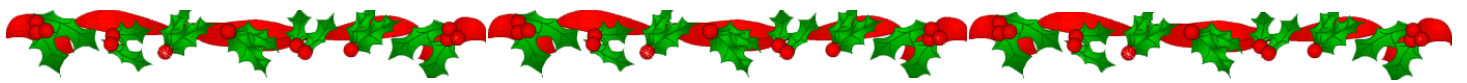
Felix Ayson, D.Sc.
Chief
SEAFDEC/AQD

The wonderful Christmas has come. Again, I am so happy to celebrate Christmas with the AQD family. I realized that the spirit of Christmas is more meaningful if we make someone happy. The smile that we give to someone also makes us even happier and fulfilled. Let's learn to share with love. I noticed that my heart is filled with joy when making someone happy.

Wishing everybody good times, good friends, and good cheers this Christmas and every day of the New Year!

Takuro Shibuno, Ph.D.
Deputy Chief and
GOJ Trust Fund Co-Manager

SEAFDEC/AQD's Management Committee during the Opening Salvo of the Christmas Celebration on 14 December 2015 (L-R): AQD Chief Dr. Felix Ayson, Deputy Chief Dr. Takuro Shibuno, TVDD Head Dr. Fe Dolores Estepa and AFD Head Ms. Kaylin Corre. Not in the picture are RD Head Dr. Evelyn Grace Ayson and TID Head Dr. Ma. Junemie Hazel Ramos



A joyous Christmas and a prosperous 2016 to all!

Evelyn Grace Ayson, D.Sc.
Head
Research Division

Merry Christmas and Happy New Year to everyone!

Fe Dolores Estepa, Ph.D.
Head
Technology Verification and
Demonstration Division

*From our family to yours, we wish you a merrier Christmas
and a healthier, wealthier, happier, and a more peaceful and
love-filled 2016. Cheers!*

Ma. Junemie Hazel Lebata-Ramos, Ph.D.
Head
Training and Information Division

*Let's celebrate the birth of Jesus Christ with thanksgiving
and praise for all His goodness, His grace and His greatness.
Let's also celebrate by sharing our blessings and helping
those who are less fortunate in life for it is by so doing that
we plant a lifetime of happiness.*

Merry Christmas and a Blessed New Year to everyone!

Kaylin Corre, M.Sc.
Head
Administration and Finance Division



SEAFDEC/AQD's Christmas celebration kicked-off with a lantern parade on 14 December 2015

PHOTOS THIS PAGE BY JM DELA CRUZ





SEAFDEC/AQD Christmas Celebration

A Season of Sharing, a Season of Thanksgiving



PHOTOS THIS PAGE BY JIM DELA CRUZ



THE WINNERS during the Opening Salvo (counterclockwise from top left): Dazzling Blue Snowflakes team (Farming Systems and Ecology Section & Fish Health Section) won first place in the Giant Parol contest; the Orange Snowman team (Administration and Finance Division, Security and Agency) received the Best Mascot award; Red Knights and Maidens team (Technology Verification and Demonstration Division) earned the top spot in the Hand-held Lantern contest; Purple Perky Snowman team (Breeding and Seed Production Section, Socioeconomics Section, Office of the Head Research Division) was chosen as the Best Group; and the Dazzling Blue Snowflakes team was declared as the overall champion for all the contests.





PHOTOS BY RH LEDESMA / MIC APALAR

GIFT-GIVING ACTIVITIES. SEAFDEC/AQD Chief Dr. Felix Ayson talks to 145 Grade 1 pupils of Nanga Elementary School, Buyu-an Elementary School, and Parara Elementary School and pupils showing the gifts they received during the gift-giving at Tigbauan Main Station on 16 December 2015 (top photos). Binangonan Freshwater Station (BFS) staff distribute gifts to the pupils of Binangonan Elementary School-SPED Class on 18 December 2015 and BFS staff together with the kids showing off their gifts (above photos)



PHOTOS BY JIM DELA CRUZ / RH LEDESMA

Clockwise from left: A thanksgiving mass marks the start of SEAFDEC/AQD's main Christmas Celebration at Tigbauan Main Station on 18 December; Research Division junior staff renders a song; and Administration and Finance Division employees give a dance number





The Technology Verification and Demonstration Division presents a song and dance number



The Training and Information Division together with the Management group during their dance presentations

PHOTOS BY RH LEDESMA / NA CABILLION



Research Assistant Mr. Jonas Mediavila shows his price for winning the slogan contest



Associate Scientist Dr. Roger Edward Mamauag wins the grand prize (a microwave oven and PHP 5,000 cash) of the raffle draw



Feed Mill Operator Mr. Vicente Teves Jr and Administrative Assistant Ms. May-Ann Balagasay pose after being chosen as the Best-dressed male and female employee of the night



PHOTOS BY MH STINSON



BFS CHRISTMAS CELEBRATION. Clockwise from top left: Guards, Technicians and Gen-set Operators enjoying the game *Human Portrait*; Scientist Dr. Malou Cuvin-Aralar and her Technical Assistant Ms. Mildred Rutaquio playing *Charades*; and group picture of BFS staff



AQD hosts 38th PCM & 18th FCG meeting of SEAFDEC

Nearly 70 participants gathered in Dusit Thani Hotel, Makati City for the 38th Meeting of the Program Committee (PCM) of SEAFDEC and 18th Meeting of the Fisheries Consultative Group of the ASEAN-SEAFDEC Strategic Partnership (FCG/ASSP). The participants comprise delegates from SEAFDEC 11 Member Countries (Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam), representatives from United States Agency for International Development's Regional Development Mission for Asia, the United States Agency for International Oceans & Fisheries, and senior officials and staff from five SEAFDEC Departments (AQD, IFRDMD, MFRD, MFRDMD, & TD) and Secretariat. SEAFDEC/AQD, in collaboration with the Department of Agriculture's Bureau of Fisheries and Aquatic Resources, is the host of this year's PCM and FCG/ASSP meeting.

SEAFDEC Program Committee is the subsidiary body of SEAFDEC Council, established with the responsibility of scrutinizing matters related to SEAFDEC

programs. This year's PCM reviewed results of SEAFDEC program implementation for the year 2015 and endorsed the proposed programs for the year 2016. At the Opening Ceremonies of the 38th PCM held on 23 November, Dr. Felix G. Ayson, Chief of SEAFDEC/AQD and co-Chair of this year's meeting welcomed the participants and highlighted the relevance of this year's gathering particularly in terms of strengthening the cooperation between SEAFDEC and Member Countries on programs that will ensure the overall health of the region's natural fishery resources and the long-term sustainability of aquaculture operations to ensure food security in Southeast Asia. In the same meeting, SEAFDEC/AQD's Deputy Chief, Dr. Takuro Shibuno; Research Division Head, Dr. Evelyn Grace de Jesus-Ayson; and Training and Information Division Head, Dr. Junemie Lebataramos briefed the participants on the accomplishments of AQD's Regional Programs and Departmental Programs in 2015 and plans for 2016. The Committee expressed appreciation to AQD for its accomplishments and



AQD Chief Dr. Felix Ayson delivers his welcome speech during the PCM's Opening Session



AQD participants of the 38th SEAFDEC Program Committee Meeting

contributions for development of sustainable aquaculture in the region.

Concerning the 18th FCG-ASSP Meeting which was held on 26-27 November, the participants discussed the follow-up actions to the

directives given at the last meetings of the SEAFDEC Council and ASEAN bodies related to fisheries, the progress and plans of the Programs under the FCG/ASSP and the international fisheries-related issues.

- B ACOSTA



The participants of the 38th SEAFDEC Program Committee Meeting



PHOTOS THIS PAGE BY IT TENDENCIA



AQD organizes first National Mud Crab Congress

SEAFDEC/AQD together with the Department of Science and Technology – Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD) and the University of the Philippines in the Visayas (UPV) made history as they organized the very first National Mud Crab Congress from 16 until 18 November 2015 in Iloilo City.

As said by DOST Secretary Engr. Mario Montejo in his keynote speech (read by DOST VI Regional Director Engr. Rowen Gelonga), “The conduct of this congress is a timely intervention as mud crab has been an emerging commodity in domestic and export markets.” He also said that it is about time for our country to take a significant leap in mud crab production – as said by the congress’ theme “Philippines: In the forefront of the mud crab industry development.”

And to start that leap, the congress invited a good combination of resource speakers, from members of the academe, government

units and industry players, giving either oral and poster presentations about mud crab biology, genetics and ecology; husbandry; feeds and feeding management; diseases and aquasilviculture. Additional topics were also presented such as post-harvest, value adding and marketing & capacity building, ordinances & standards, and financing. A workshop was also held to know the status, identify the research gaps & training needs in hatchery & nursery and in grow-out & post-harvest of mud crabs.

With over 200 participants coming from various sectors and different parts of the country, the first National Mud Crab Congress was a success. According to DOST-PCAARRD’s Dr. Dalisay Fernandez during her closing remarks, “For the past three days, we gained knowledge on the present state of the mud crab industry and on the significant findings of the mangrove crab [mud crab] projects being implemented by AQD, UPV and other research institutions. We also learned the Philippine



AQD Chief Dr. Felix Ayson welcomes guests and participants to the congress. Behind him (from L-R) are special guests DOST-PCAARRD Inland Aquatic Division Director Dr. Dalisay Fernandez, Iloilo City Agriculturist Mr. Romulo Pangantihon in behalf of Iloilo City Mayor Hon. Jed Patrick Mabilog, DOST Region VI Regional Director Engr. Rowen Gelonga in behalf of DOST Secretary Mr. Mario Montejo and UPV Chancellor Dr. Rommel Espinosa

PHOTOS THIS PAGE BY JIM DELA CRUZ



AQD scientists Dr. ET Quintinio & Dr. Fe Dolores Estepa moderates the workshop proper (left photo) and Integrated Services for the Development of Aquaculture and Fisheries’ Dr. Clarissa Marte summarizes outputs of the workshop

National Standards that will serve as guidelines for the exporters and traders and for us [the Philippines] to be [more] competitive with our neighboring countries.” She also mentioned that with these activities, the participants

had learned that information sharing of S&T based knowledge and continuous private and public partnership are vital in achieving the development of the mud crab industry in the country.

- JM DELA CRUZ



The first National Mud Crab Congress guests and participants





AQD joins 10th Shrimp Congress, a first in Gensan

S EAFDEC/AQD Chief Dr. Felix Ayson and more than 20 senior and junior SEAFDEC/AQD staff participated in the 10th National Shrimp Congress, with the theme “Maximizing the Benefits of Shrimp Culture for a Modern Globally Competitive Industry.” The event was held from 11 to 13 November 2015 which took place for the first time in General Santos City, the shrimp production hub in Mindanao.

This year’s Congress was geared towards regaining the Philippines’ position in shrimp export, hence; topics during technical sessions focused on updates/recent developments in aquaculture production, health management, feeding management, marketing and policies.

The event also had an exhibit where SEAFDEC/AQD was able to showcase its aquaculture technologies and reach more aquaculture stakeholders in the Mindanao area. About 100 participants and guests visited SEAFDEC/AQD’s booth.

The 10th National Shrimp Congress was organized by the Bureau of Fisheries and Aquatic Resources, Philippine Shrimp Industry Inc., and SARGEN Stakeholders’ Association. Other institutions which supported this conference were Department of Science and Technology Region XII, SEAFDEC/AQD, Provincial Governor’s Office of Sarangani, Congressional District of Sarangani, Department of Trade and Industry Region XII, and the Department of Tourism Region XII. 🐾

- RH LEDESMA



PHOTOS BY IT TENDENCIA

Some of the SEAFDEC/AQD participants (from left) Dr. Rolando Pakingking Jr, Dr. Evelyn Grace Ayson, SEAFDEC/AQD Chief Dr. Felix Ayson, Ms. Angela Denise Bilbao (standing), Dr. Edgar Amar, and Mr. Gerald Gonzaga (rightmost)



Shrimp Congress participants check out SEAFDEC/AQD publications

AQD participates in the 2nd Iloilo Biodiversity Week

More than 700 participants and students in batches attended the 2nd Iloilo Provincial Biodiversity and Watershed Week Celebration on December 1-3, 2015 at Casa Real, Provincial Capitol, Iloilo City. The theme for this year is “Biodiversity in Watersheds: Challenges for a Climate-Change-Resilient Iloilo.”

This activity aims to foster awareness on the value of preserving biodiversity to the general public and on the proper management of watersheds in the Province of Iloilo. The three-day event

includes series of lectures on the concepts of biodiversity and the status of biodiversity from the ridge to the reef in Iloilo Province. SEAFDEC/AQD’s Dr. Teodora Bagarinao gave a lecture on marine biodiversity in the morning of December 2, 2015. In addition, there was a biodiversity quiz, on-the-spot poster making contest, exhibits and many others. The general public particularly the students are invited to attend and participate in this event so they will learn and appreciate the value of biodiversity. 🐾

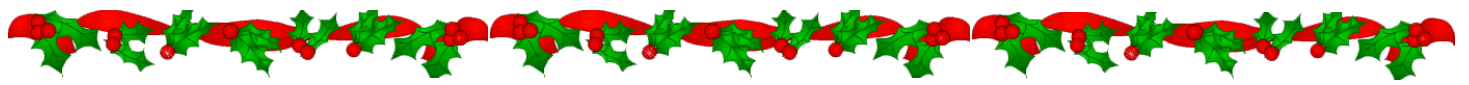
- JME ALMENDRAS



PHOTO BY JME ALMENDRAS

SEAFDEC/AQD’s Fishworld Curator, Dr. Teodora Bagarinao, explaining to Dr. Gary Wilkins, PENRO 6’s watershed consultant, the biodiversity survey that she did in the brackishwater ponds and mangroves in AQD’s Dumangas Station and the nearshore biodiversity of AQD’s Tigbauan Main Station





AQD hosts molecular biology seminar for teachers

An enrichment seminar for American Society for Microbiology (ASM) members was held at SEAFDEC/AQD's Tigbauan Main Station in Iloilo, Philippines on 4-5 December 2015. More than 40 participants from various academic and private institutions attended the seminar, "Basic Techniques in

Molecular Biology for High School and College Science Teachers."

The seminar included topics on flow of genetic information in the cell, basics of polymerase chain reaction and agarose gel electrophoresis, principles and applications of gene cloning, analyzing gene sequence, and generation of Rifampicin

mutants from Mb-BCG cells, among others.

The event was organized by SEAFDEC/AQD in collaboration with De La Salle University, ASM, Miriam College, and University of the Philippines Visayas.

- RH LEDESMA



SEAFDEC/AQD scientist Dr. Rolando Pakingking Jr talks on the applications of animal cell culture

PHOTO BY IT TENDENCIA

AQD attends forum on aquaculture & chemical biology

AQD Associate Researcher Ms. Sheryll Avanceña attended the Northeastern Asian (NEA) and Asian Heads of Research Councils (ASIAHORCs) Joint Symposium on Chemical Biology from 9 to 10 November 2015 in Okinawa, Japan. The aim of the symposium is to foster young researchers from different countries who share common research topics and establish networks.

Ms. Avanceña presented her study on "Improved growth performance of *Gracilariopsis heteroclada* through short-term nitrogen enrichment." The result of her study suggests that the short-term nitrogen enrichment method could be an alternative culture strategy to increase *Gracilariopsis heteroclada* production and lower farming costs.

Prior to attending the symposium, she also gave a presentation together with



(L-R) AQD Associate Researcher Ms. Sheryll Avanceña, Scientist Dr. Mae Catacutan and Associate Scientist Dr. Frolan Aya give their presentation at ICAI 2015

AQD Scientist Dr. Mae Catacutan and Associate Scientist Dr. Frolan Aya at the 5th International Conference of Aquaculture Indonesia (ICAI) 2015 held 29 to 31 October 2015 in Jakarta, Indonesia.

The studies presented include: (1) "Abdominal segment deformity disease (ASDD) syndrome and fused

body segment deformity (FBSD) in cultured *Penaeus indicus*" by Ms. Avanceña; (2) "Silver theraapon *Leiopotherapon plumbeus* (Perciformes: Terapontidae) larvae survive better in ambient lake water with *Terminalia cattapa* leaves as substrate" by Dr. Aya and (3) "Digestability and effective level of meat and bone meal

in practical formulated diet for milkfish, *Chanos chanos* Forsskal in freshwater" by Dr. Catacutan.

The ICAI 2015 featured plenary and technical sessions covering aspects of the latest technological advances and research results in aquaculture around Indonesia, the Asia Pacific and other countries.

- GK FAIGANI

PHOTOS COURTESY OF SS AVANCEÑA



14 Pilmico staff complete course on tilapia

A short-course on tilapia hatchery and grow-out operations was conducted for a group of sales and management staff of Pilmico Foods Corporation (PFC), an Aboitiz subsidiary company, from 18 to 20 November 2015 in SEAFDEC/AQD's Binangonan Freshwater Station. It was organized in support to PFC's target to expand its operations to aquaculture feed business in the coming years. The participants, who were based mostly in Central and Northern Luzon, acknowledged that

attending this course to learn the basics of tilapia production will redound greatly to their present work.

During the three-day training, the participants learned a lot – not only technical know-how on the suitable sites for the establishment of a hatchery, nursery and grow-out culture systems for tilapia, but also on the appropriate broodstock development and management techniques, and mass production of tilapia fry in the hatchery. Other relevant topics discussed include genetics

and sustainable management of farmed tilapias, feeding management practices, economics of tilapia culture and post-harvest management.

A taste test of processed tilapia fillet at a cooking demonstration capped the three-day training. 🐟



Sexing of female and male tilapias

PHOTO BY MH STINSON

- F AYA

9th CBFWA focuses on resource management

The 9th session of the International Training Course on Community-Based Freshwater Aquaculture (CBFWA) for Remote Areas of Southeast Asia, with funding support from the Government of Japan – Trust Fund, was successfully held at the Binangonan Freshwater Station from 24 November to 3 December 2015. The CBFWA course had nine participants from Cambodia (1), Vietnam (1), the Philippines (5) and Papua New Guinea (2).

The ten-day training course consisted primarily of lectures and practical activities to provide the trainees with updates on freshwater aquaculture technologies from broodstock development to seed production and nursery & grow-out phase of tilapia, freshwater prawn, bighead carp and native catfish. Other major topics discussed were on genetics and sustainable management of farmed

tilapias, diseases of freshwater fishes & food safety, business planning & management, and nutrition & feeding. The trainees experienced to conduct actual spawning trials of bighead carp and catfish, observations of egg and larval development, and supervised maintenance of these commodities.

One of the highlights of the training course was community organizing which started with a visit and observation of the fish farming community in Taal Lake and the conduct of Rapid Rural Appraisal (RRA) activities in Brgy. Sampaloc, Talisay, Batangas. Guided by the resource persons, the participants conducted consultations and interviews to various aquaculture stakeholders to come up with a seasonal calendar of activities. Results of this community experience were then summarized and recommendations were



Participants interact with members of the community to come up with a seasonal calendar of activities

PHOTO BY MH STINSON

presented for discussion. Moreover, the officers and members of Taal Lake Aquaculture Alliance Incorporated (TLAAI) led by their President, Mr. Rodrigo Cacao also joined the group in the RRA activities, wherein aquaculture resource management, particularly on lessons and issues on lake management and sustainable aquaculture practices in Taal Lake were tackled.

The trainees also visited Tagaytay and enjoyed the beautiful scenery overlooking

Taal Volcano, and were accommodated at the National Fisheries Biological Center in Taal, Batangas to see the breeding facilities for ornamental fishes and the popular *maliputo* (*Caranx ignobilis*) of Taal.

With these learnings and experiences, the participants were able to prepare a business plan or a project proposal for their community, which they presented during the last day of the training. 🐟

- F AYA



PTAC discuss AQD accomplishments and plans

The Management Committee of SEAFDEC/AQD and senior representatives of the relevant Philippine Government institutions (Department of Agriculture and its attached agencies, Bureau of Fisheries and Aquatic Resources and Bureau of Agricultural Research; Department of Foreign Affairs; Department of Budget and Management and the University of the Philippines Visayas) gathered on 20 October 2015 at the Best Western Plus Antel Hotel, Makati City for the 25th Meeting of the Philippine Technical Administrative Committee (PTAC). PTAC comprises the high level representatives of relevant Philippine Government agencies and is tasked to provide close coordination between the host government and SEAFDEC with regard to the operations of AQD.

The meeting was convened to review the accomplishments of SEAFDEC/AQD in 2015 (R&D Programs, and Administration and Finance) and plans for 2016, for endorsement to the SEAFDEC Program Committee and the Philippine Government, and to discuss the pressing issues that concern the operations of AQD. This year's PTAC meeting was chaired by the Department of Agriculture (DA) Undersecretary for Fisheries and BFAR Director Atty. Asis Perez.

PTAC noted the significant progress on SEAFDEC/AQD's R&D programs in 2015 and endorsed its 2016 planned activities, including the proposed budget for 2017. The other highlights of discussions are as follows: (i) SEAFDEC/AQD has been requested to help BFAR in the establishment of the giant freshwater prawn



PHOTO BY B ACOSTA

(From right) Dr. Felix Ayson, SEAFDEC/AQD Chief; Atty. Asis Perez, Department of Agriculture Undersecretary for Fisheries and BFAR Director; Dr. Crispino Saclauso, Dean of UPV College of Fisheries and Ocean Sciences and Mr. Rafael Ramiscal, Head of Capture Fisheries Division, BFAR and SEAFDEC National Coordinator for Philippines; during the 2015 PTAC meeting

(*Macrobrachium rosenbergii*) hatchery facility in Cotabato City which will be dedicated for possible reintroduction of 16 *Macrobrachium* species found endemic in the areas of Liguasan marsh; (ii) PTAC commended SEAFDEC/AQD for its significant efforts on capacity building; hence, encouraged the Department to continue training for governments

of various countries since this initiative promotes goodwill. In this connection, SEAFDEC/AQD was informed of the present initiative to train the country's local government units on aquaculture. BFAR will initiate formal cooperation arrangements with SEAFDEC/AQD to address this mandate.

- B ACOSTA

Thai student learns from AQD

Ms. Rarinmas Greethape, a senior student from Silpakorn University, Thailand, started her on-the-job training last August 11, 2015. Her training included activities in marine fish hatchery, natural food and fish diseases diagnosis. Ms. Greethape received her certificate of internship from the Training and Information Division Head Dr. Ma. Junemie Hazel Lebata-Ramos on 7 December 2015.

- GK FAIGANI



PHOTOS BY RT BAUTISTA / R GREETHAPE





RESEARCH SEMINARS



AQD Associate Scientist Dr. Jon Altamirano talked about his study on “Some requirements for tiger shrimp stock enhancement in New Washington Estuary, Aklan, Philippines” on 12 November 2015.

Dr. Altamirano conducted site-specific assessments and comparative experiments to identify: (1) source of shrimp stocks; (2) location for culture and release; (3) age of shrimps at release; and (4) intermediate rearing requirements. The result of the site-specific assessment showed that the water quality in the upper rivers of the estuary has warmer temperature and lower salinity that are suited for smaller shrimp juveniles. There are also mangroves that serve as natural nurseries. According to him, the release experiment showed that 60-day old (0.5 g BW) shrimp have higher survival (87%) compared to 30-day old and 90-day old shrimp. He added that the optimal density should be around 40 m² for a 30 day rearing. He also suggested that it is best to conduct intermediate culture runs from April to September. 🐞 - GK FAIGANI



AQD microscopist Mr. Norwell Brian Bautista presented his research study “Optimization of Poly-β hydroxybutyrate (PHB) production in *Bacillus* sp. JL47: A case for the usefulness of response surface methodology” on 26 November 2015.

According to Mr. Bautista, response surface methodology (RSM) is a collection of statistical and mathematical techniques useful for developing, improving, and optimizing processes in which a response of interest is influenced by several variables. This method also accounts for the synergistic or antagonistic effects of the different variables in the system; in addition to their individual effect on the response.

For this study, Mr. Bautista used RSM to determine the optimum culture conditions for *Bacillus* sp. JL47 to achieve a maximum yield of Poly-β-hydroxybutyrate (PHB). The results showed that *Bacillus* sp. JL47 produces the most PHB when grown in 2.2% maltose, 0.8% yeast extract + peptone (all other culture parameters held constant in all experiments). Moreover, it was found out that culture incubation time does not affect the rate of PHB production from 48 to 96 hours. Mr. Bautista also shared that at the predicted optimum, *Bacillus* sp. JL47 accumulates PHB at least 46% on cell dry weight.

This study was Mr. Bautista’s entry to the 2015 UPV Graduate Research Conference held on 7 November 2015 at the UPV Iloilo City Campus which won first place in the oral presentation category for the Natural Sciences and Fisheries Cluster. 🐞 - RH LEDESMA



Mr. David Bright of the University of Sunshine Coast in Queensland, Australia presented his study titled “A study into parental assignment of the communal spawning protogynous hermaphrodite giant grouper *Epinephelus lanceolatus*” during the research seminar at AQD’s Tigbauan Main Station on 10 December 2015.

Parental contributions of giant grouper to communal spawns in captivity are important for establishing genetic management of species. Mr. Bright’s study aims to answer the following: (1) which parent (male or female) is breeding in a communal spawn; (2) if a difference exists between batches of spawns in the same tank composition and (3) if newly sex changed males contribute to communal spawns.

He followed the spawning dynamics of three males and three females over 6-8 consecutive days, over three time periods. A total of 574 offspring from 20 nights of spawning were validated and utilized through polymorphic microsatellite markers.

The result of the study shows that: (1) most parental assignment were attributed to one dominant male who initiated each spawning batch, however, all males and females successfully mated over the spawning period; (2) there’s a significant variation in parental contributions within but not always between batches with clear male dominance hierarchy and (3) newly changed males contribute to communal spawns.

This research, according to Mr. Bright, validates the molecular tools for genetic monitoring of giant grouper and also improves the understanding of spawning dynamics of protogynous hermaphroditic communal spawners over time in an aquaculture setting. 🐞

- JM DELA CRUZ





My thoughts this Christmas...

Let's celebrate Christmas with grateful hearts for the love, blessings, lessons learned but most of all thanking the Lord that we are still a part of Christmas 2015 (*salamat kay buhi pa kita*). Christmas is also a time when we can be excused of being over generous (*okay lang ah, Christmas man*) and appeasing to those whom we felt we disregarded (*magpa-cheese burger ka naman*). We felt hopeful pag-Christmas as it ushers the entry of a new year, another chance para sa mayo nga palaabuton (*mabag-o na ako sa 2016*).

Happy Christmas celebration everyone (bonus pa more *kag renewed contracts sa FTs*)!
– Margarita Arnaiz

It's the most wonderful time of the year! Merry Christmas everyone! – Charmi Fernandez

Compassion!!! – Raisa Joy Castel

World peace! – Josette Gonzaga

Let the spirit of love gently fill our hearts...
Have a blessed Christmas to all!!!
– Management Information System Office

Eat healthy, live healthy, Merry Christmas and a Prosperous New Year!!! – NFDS Family

Christmas season is always the best time to reflect on the year that came about, to be better in the things that you do and to be thankful for all the blessings and opportunities that you've had. I wish nothing this Christmas than to be able to share these blessings with family, friends, loved ones and people in need. May we never forget that all the things that we do is always for the greater glory of our Lord and Savior, Jesus Christ! Merry Christmas to everyone!

– Caryl Vincent Genzola

May God's blessing shine down upon you and your family this holiday season and throughout the coming year. Happy Christmas to all!

– Janelli Garibay

The happiest of holidays to all!

– April Abalajon-Nievaes

"The Word became flesh and made His dwelling among us. We have seen His glory, the glory of the One and Only, who came from the Father, full of grace and truth." – John 1:14 ... May we always remember the true meaning of Christmas. Let us continue to spread the love and share our blessings. – Mary Grace Oliveros

Japanese students tour AQD facilities

Around fifty students and crew of the research vessel, Tenyo Maru, of the National Fisheries University, Shimomoseki, Japan visited SEAFDEC/AQD's research facilities in Tigbauan, Iloilo on 11 December 2015. 🐙



PHOTOS BY EV ANTONINO

The Japanese students at SEAFDEC/AQD's Abalone Hatchery (left photo) and Integrated Fish Broodstock Hatchery Complex





Sending blessings of Peace and Happiness to you on Christmas! – Nancy Acdol

Christmas is the season for love, peace and happiness. My greatest symbolism for Christmas was my brother. He fought his greatest battle in life and God never left him. He is a real fighter! Now, I wish and pray for his soul to have peace, love and happiness. Cheers! It's Christmas :)
- Christian Cordero

For Christmas is a season of giving and gratitude, a celebration of thanksgiving of His birth. We wish that the Christmas spirit of charity will live in our hearts throughout the year. May the essence of hope and love that Christmas brings is not just a yearly event but a true feeling that we can share with everyone around us.
- Maffy and Rozan

“Christmas is not a time nor a season, but a state of mind. To cherish peace and goodwill, to be plenteous in mercy, is to have the real spirit of Christmas.” - Kevin Milne ... As we commemorate Christ's birth, may our hearts be filled with gratitude for the immeasurable love He bestowed upon us. May this gratefulness flow and overflow so we can be a blessing to others.
- Sea Cucumber/RIHN Project Team

May the spirit of Christmas bring you peace. The gladness of Christmas give you hope and the warmth of Christmas grant you love. Merry Christmas!!! :) - Seaweed Pipz

Christmas is a season of great joy, a time for remembering the past and hoping for the future. Wishing you wonderful memories during this joyous season. Merry Christmas!!!
- Agnes

Christmas is the spirit of giving and thanksgiving. Wishing everyone a Merry Christmas. May the God of hope fill us with joy and peace... - Jo Anne

Christmas is giving and forgiving. Let our hearts be filled with joy and abundance of love to everyone. Have a Merry Christmas and Prosperous New Year ahead of you. - Malou

I wish that everyone of us will always look at the brighter side of life... Have a spirit-filled Christmas to one and all!

- Medical and Dental Services Unit


My wishes for this Christmas and throughout the years to come are

Peace on
Earth
And
Compassion for
Each and everyone of us

and to restore

Living
Our
Values
Everyday

-Shine, HRMS


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