

PEMAKALAH SEMINAR

SEMINAR INTERNASIONAL  
INTERNATIONAL CONFERENCE OF AQUACULTURE INDONESIA  
(ICAI)

Solo, 26-28 Oktober 2017

Dr. SUPONO, S.Pi., M.Si.

HALAMAN PENGESAHAN  
PEMAKALAH SEMINAR

1. Judul Makalah : Performance of Inland Shrimp Culture in East Lampung, Indonesia
2. Identitas Pemakalah
  - a. Nama Lengkap dan Gelar : Dr. Supono, S.Pi. M.Si.
  - b. Jenis Kelamin : Laki-Laki
  - c. Gol. Pangkat Dan NIP : IIC/ 197010022005011002
  - d. Jabatan Fungsional : Lektor
  - e. Fakultas/PS : Pertanian/Budidaya Perairan
3. Publikasi : Pemakalah Seminar Internasional
4. Nama Kegiatan : International Conference of Aquaculture Indonesia (ICAI) 2017
6. Penyelenggara : Masyarakat Akuakultur Indonesia (MAI)
7. Tanggal Kegiatan : 26-28 Oktober 2017

Bandar Lampung, 1 November 2017  
Pemakalah,

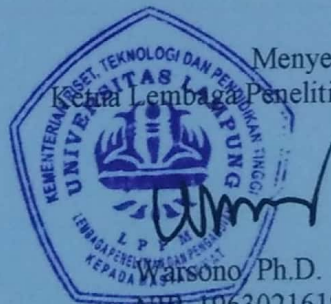
Mengetahui,  
Wakil Dekan I  
Fakultas Pertanian



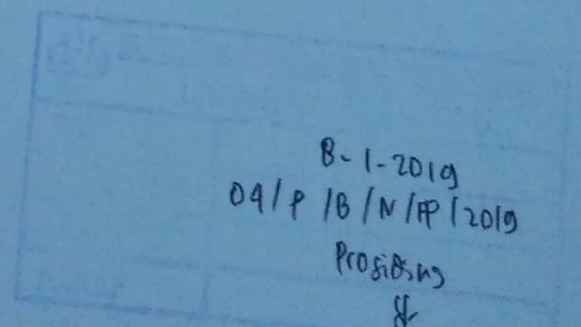
Prof. Dr. Ir. Dermiyati, M.Agr. Sc.  
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Dr. Supono, S.Pi. M.Si  
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# INDONESIAN AQUACULTURE 2017

International Conference of Aquaculture Indonesia  
October 27-28, 2017 Solo, Indonesia



## *Certificate of Participation*

**Supono**

For Oral Presentation of

PERFORMANCE OF INLAND SHRIMP CULTURE IN EAST LAMPUNG, INDONESIA

Prof. Rokhmin Dahuri  
Steering Committee Chair

## SEMINAR INTERNASIONAL

**International Conference of Aquaculture Indonesia (ICAI) 2017**

**(Solo, 26-28 Oktober 2017)**

**Dr. Supono, S.Pi., M.Si.**

Kegiatan Seminar Internasional : **International Conference of Aquaculture Indonesia (ICAI) 2017** bertempat di Hotel the Alana Solo, Jawa Tengah pada tanggal 26-28 Oktober 2017 diikuti oleh peserta dari beberapa negara, antara lain : Amerika Serikat, Malaysia, Singapura, Myanmar, India dan Indonesia sebagai tuan rumah. Acara tahunan organisasi profesi Masyarakat Aquaculture Indonesia (MAI) itu dibuka oleh ketua MAI Prof. Dr. Rokhmin Dahuri, M.S.. Pemateri utama pada konferensi ini adalah (Plenary Session I) :

1. Guillaume Drillet, Ph.D (President Elect Of Was 2016-2019, Apc Chapter) Dengan Judul Sustainable Aquaculture Management: Carrying Capacity, Ecology And Socio-Economy Approaches
2. Prof. S. Budi Prayitno, Ph.D (Diponegoro University, Indonesia) Dengan Judul Current Status And Problem Solving Development In Finfish Aquaculture Disease In Indonesia
3. Prof. Dr. Allen Davis (Auburn University, Usa) Dengan Judul Research Update: Development Of Plantbased Diets For Marine Finfish Aquaculture
4. Dr. Farshad Shishehchian (Past President Of Was 2014-2017, Apc Chapter) Dengan Judul Current Innovative Technology For Sustainable Aquaculture Production

Untuk Class session dibagi dalam beberapa topik :

1. Management and Technology
2. Disease and Environment
3. Feed and Nutrition
4. Shrimp Farmers" Day

Pada sesi ini penulis tergabung dalam kelas Management dan Technology dengan menyampaikan materi berjudul : PERFORMANCE OF INLAND SHRIMP CULTURE IN EAST LAMPUNG, INDONESIA.

Pada akhir sesi (Plenary Session II ) diisi oleh beberapa pemateri anyata lain :

1. Prof. Rokhmin Dahuri (President Indonesian Aquaculture Society) dengan Judul Current Status And Recent
2. Prospectives Of Aquaculture Development In Indonesia
3. Dr. Nyan Taw (Shrimp Aquaculture Consultant, Basemalaysia) dengan Judul Innovative Biofloc Technology For Sustainable Shrimp Farming Production: Present And Future
4. Sidrotun Naim, Ph.D (Director Of Aqua Pathology Studies, Surya University) dengan Judul Development And Problem Solving Of White Feces Disease In Litopenaeus Vannamei
5. Albert G.J. Tacon, Ph.D (Aquatic Farms Ltd., Hawaii, Usa) dengan Judul Nutrition Research Update: Fishmeal Replacement For Sustainable And Low-Cost Effective Aquafeed

International Conference of Aquaculture Indonesia  
2017

## **Performance of Inland Shrimp Culture in East Lampung, Indonesia**

**SUPONO**  
**Lampung University**

### **INTRODUCTION**

- White shrimp (*Litopenaeus vannamei*) farming in Indonesia has developed and reached good result
- White shrimp has been capable to increase pond productivity from 5-6 tons/ha/cycle to 10-20 tons/ha/cycle.
- Due to high density (up to 100 pcs/m<sup>3</sup>) and survival rate (up to 90%)

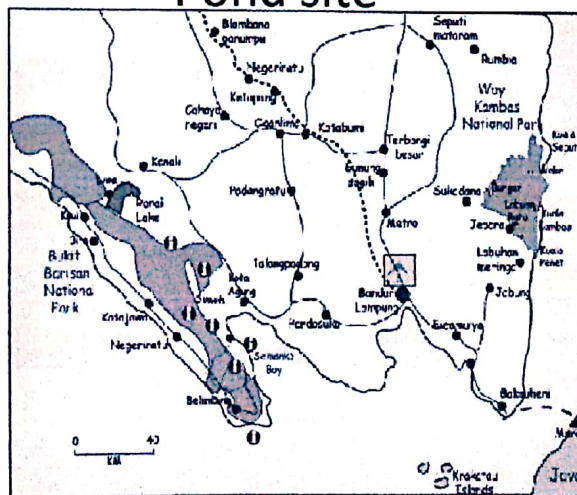
- *In some areas in Indonesia (ex. : Lampung Province) recently farmers are facing some problems in growing up vannamei due to disease attack, mostly viral disease*
- Shrimp culture activity cause environmental problems (organic waste, mangrove destruction)

## The case in East Lampung

- East Lampung District was a main producer of *P monodon* in Lampung Province in the past
- Due to water quality degradation and diseases, the production was declined
- Other problem : low fry quality
- Farmers only culture *P monodon* at traditional scale, pond productivity under 300 kg/ha

- Need a suitable strategy to increase pond productivity
- Introduction of *Litopenaeus vannamei* to farmers
- *Litopenaeus vannamei* is an euryhaline species (0,5-35 ppt)
- High tolerance at high density, fast growth, SPF fry, and lower feed conversion ratio

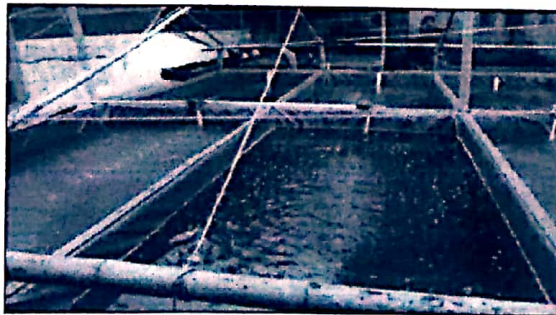
Pond site



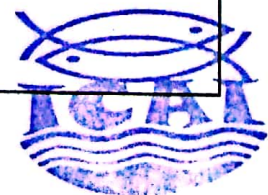


## Previous study

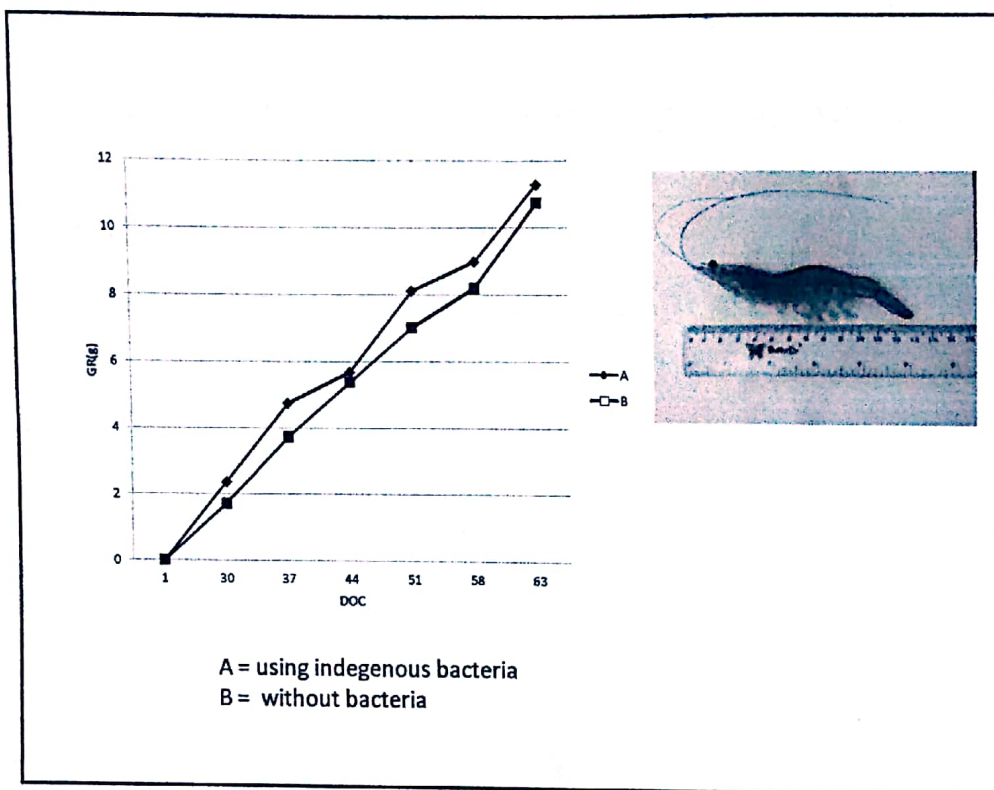
- Conducted in laboratory scale
- Using lined pond : 4m x 2m x 0,7m in dimension
- Water volume : 4 m<sup>3</sup>
- Water height : 0.5 m
- Salinty : +/- 5 ppt
- Density : 600 Pls/pond (150 Pls/m<sup>3</sup>)
- PL age : 10
- Acclimation : single step acclimation



TRIAL PONDS



International Conference  
Aquaculture Indonesia



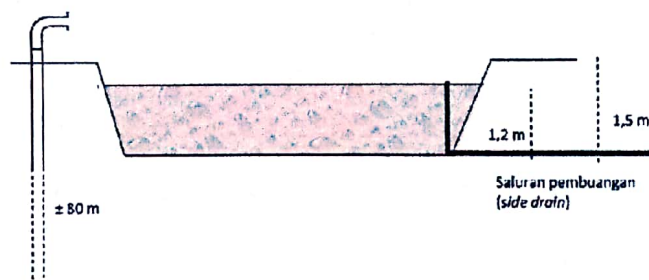
### Shrimp performances (DOC 63 days)

	Using indigenous bacteria	Without bacteria
SR	73 %	66%
Biomass	4.8 kgs	4.1 kgs
GR	11.29 g	10.75 g
FCR	1.35	1.58

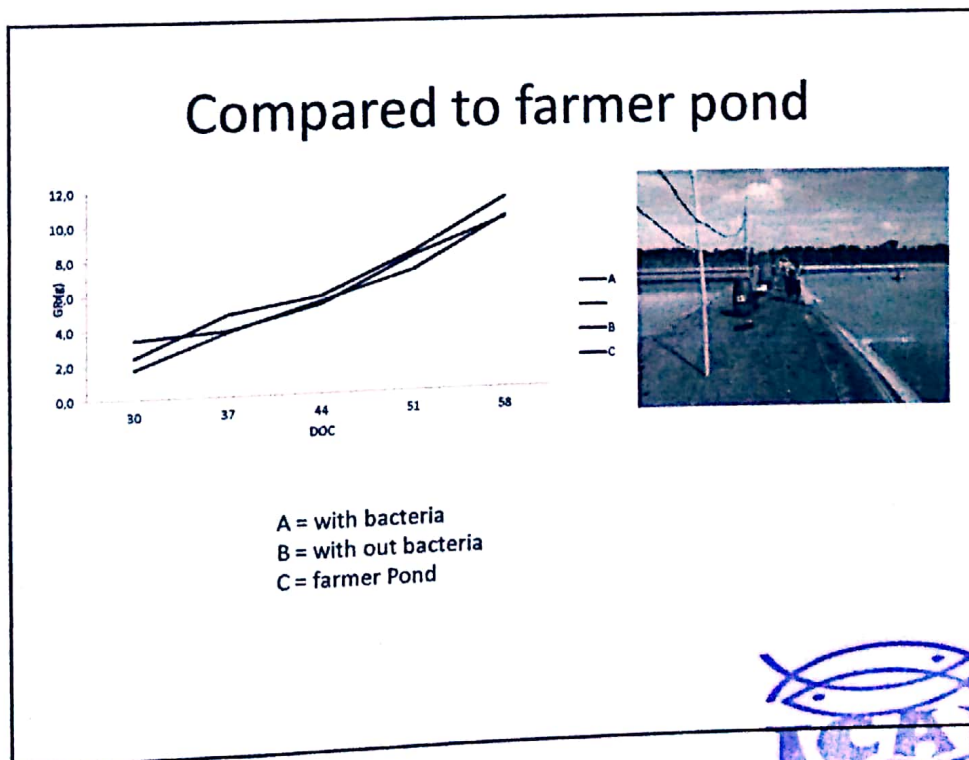
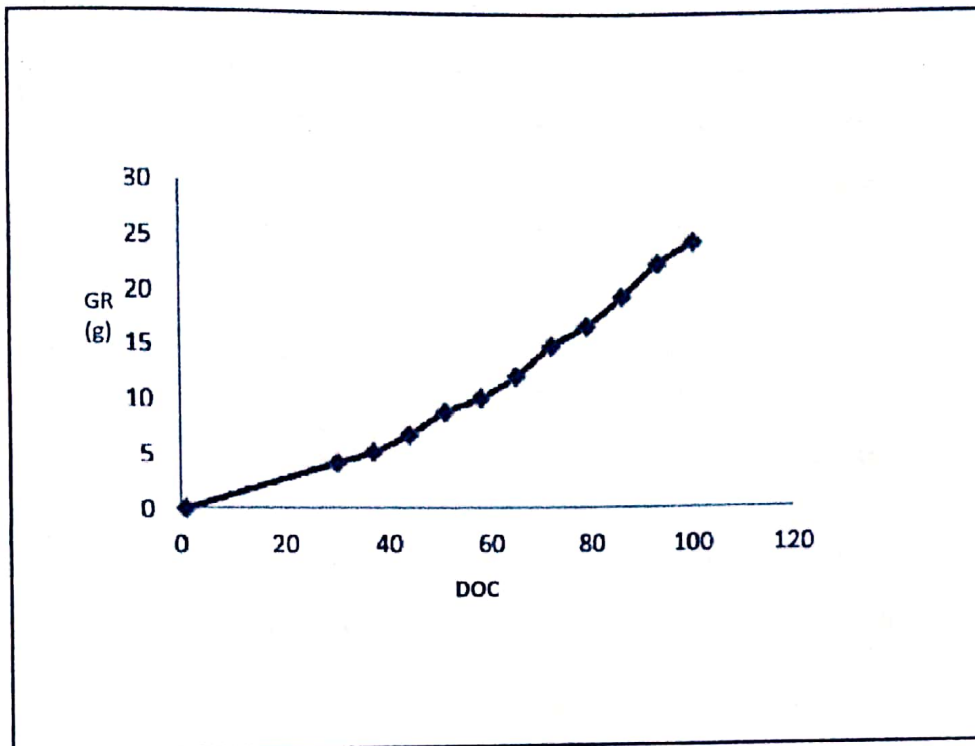


## Performances in commercial pond

- Using semi lined pond
- Dimension of pond : 40 m x 50 m x 1,5 m



No	Variable	Information
1	Pond size	2000 m <sup>2</sup>
2	Fries	140 000 PL's
3	Density	70 PL's/m <sup>2</sup>
4	SR	85 %
5	Partial harvest I (size 97)	310 kgs (30.097 pcs)
6	Partial harvest II (size 76)	515 kgs (39.313 pcs)
7	Final harvest (size 42)	1180 kgs
8	Total harvest	2005 kgs
9	FCR	1.5
10	Day of culture (DOC)	110 days



No	Keterangan	Jumlah	Harga (Rp)	Total (Rp)
<b>Biaya Produksi</b>				
1	benih udang	120.000	45	5.400.000
2	pakan	3.025	14.000	42.350.000
3	obat-obatan			1.000.000
4	BBM	2.600	5.800	15.080.000
5	tenaga kerja	4	1.500.000	6.000.000
6	Insentif	2.000	1.000	2.000.000
7	Lain-lain			5.000.000
	<b>Jumlah</b>			<b>76.830.000</b>
	<b>Hasil panen</b>	<b>2.025</b>	<b>78.000</b>	<b>157.950.000</b>
	<b>keuntungan</b>			<b>81.120.000</b>
	B/C ratio			1,055
	R/C ratio			2,055



**INTERNATIONAL CONFERENCE OF  
AQUACULTURE INDONESIA 2016**  
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September 04, 2017

TO: **Dr. Supono**  
**Lampung University**

RE: INVITATION to **INTERNATIONAL CONFERENCE OF AQUACULTURE INDONESIA (ICAI) 2017**

On behalf of INTERNATIONAL CONFERENCE OF AQUACULTURE INDONESIA (ICAI) 2017, I am pleased to invite you to attend ICAI 2017 Conference and Exposition, which is to be held on October 26-28, 2017 in Solo, Indonesia, a traditional centre of Central Javanese culture

**ICAI 2017** will feature plenary and technical sessions covering aspects of the latest technological advances and research results in aquaculture around the Indonesia, Asian Pacific and other countries. There will be international effective communication forum of aquaculture stakeholders to share the latest research and experiences on technical and practical aspects of aquaculture.

OFFICIAL NOTICE OF ABSTRACT ACCEPTANCE – Thank you for your abstract submission: **PERFORMANCE OF INLAND SHRIMP CULTURE IN EAST LAMPUNG, INDONESIA**

The program committee of ICAI 2017, consisted of experts in aquaculture, will be reviewing your abstract for oral presentation. All accepted abstracts will be published in the Conference Guide Book. The accepted abstracts must be followed by submission of the full papers to review (deadline full paper submission is on September 10, 2017).

It is our sincere hope that you will be able to spend a piece of your time to attend ICAI 2017. The paper you present, as well as your expertise and attendance, will benefit the conference. In addition, what you learn from the conference will provide benefits for aquaculture development in your country.

All ICAI 2017 attendees are responsible for their own travel expenses including airfare, lodging, local transportation, meals, conference registration, and any other incidentals.

Check the **ICAI 2017 web page** (<http://icai.aquaculture-mai.org>) to register, for program updates, or to book your hotel reservation.

We look forward to seeing you on October 26-28, 2017 in Solo, Indonesia!

Sincerely,

**Wikke Elta Ayu Selviani**  
Management Secretariat of  
ICAI 2017

## PROGRAM OF ICAI 2017

**THURSDAY, OCTOBER 26<sup>th</sup>**

- 13:00 – 20:00 **Registration Open & Exhibit Set-up**  
Submission of files for oral presentations, Poster Set-up, Check In Hotel
- Annual Meeting of Indonesian Aquaculture Society Member & Board only
- 19:00 – 20:00 Welcome Speech (Sambutan & Arahan Ketum. MAI: Prof. Rokhmin Dahuri)  
Brief Progress Report of MAI (Sekjen MAI: Agung Sudaryono, Ph.D)
- 20:00 – 21:00 Sharing Aquaculture Business Experience (Dr. Santoso)  
'Kiat dan Kunci Sukses Membangun Bisnis Akuakultur yang Profitable dan Sustainable'
- 21:00 – 22:00 **Scientific Journal FGD:** Preparation, Writing up, Submitting and Publication (Dr. Alim Isnansetyo)  
MC: Dr. Rita Rostika, Moderator: Agung Sudaryono & Mussalimun

**FRIDAY, OCTOBER 27<sup>th</sup>**

- 07:00 – 12:00 **Registration Open**
- 08:00 – 08:50 **Lecture :**  
**Guillaume Drillet, Ph.D** (*President Elect of WAS 2016-2019, APC Chapter*) SUSTAINABLE AQUACULTURE MANAGEMENT: CARRYING CAPACITY, ECOLOGY AND SOCIO-ECONOMY APPROACHES
- 08:50 – 09:00 **Nation Song: Indonesia Raya**
- 09:00 – 09:10 **Welcome Speech : President MAI (Prof. Rokhmin Dahuri)**
- 09:10 – 09:25 **Opening Ceremony & Keynote Speech :**  
**Mrs. Susi Pujiastuti** (*Minister for Marine and Fisheries Affairs of Indonesia*) INDONESIA AS ONE OF THE BIGGEST SUSTAINABLE AQUACULTURE PRODUCERS IN THE WORLD
- 09:25 – 09:45 **Morning Coffee Break**
- 08:30 – 17:30 Exhibition Open
- Plenary Session 1**
- 09:45 – 10:15 **Prof. S. Budi Prayitno, Ph.D** (*Diponegoro University, Indonesia*) CURRENT STATUS AND PROBLEM SOLVING DEVELOPMENT IN FINFISH AQUACULTURE DISEASE IN INDONESIA
- 10:15 – 10:45 **Prof. Dr. Allen Davis** (*Auburn University, USA*) RESEARCH UPDATE: DEVELOPMENT OF PLANT-BASED DIETS FOR MARINE FINFISH AQUACULTURE
- 10:45 – 11:15 **Dr. Farshad Shishehchian** (*Past President of WAS 2014-2017, APC Chapter*) CURRENT INNOVATIVE TECHNOLOGY FOR SUSTAINABLE AQUACULTURE PRODUCTION
- 11:45 – 11:45 DEMONSTRATING SUSTAINABILITY IN AQUACULTURE THROUGH STANDARDS (SGS Ltd.)
- 11:45 – 13:10 **Friday Prayer & Lunch** (Provided) (**Poster Presenter**)

### Class Session I

- 13:10 – 15:30
- Management and Technology
  - Disease and Environment
  - Feed and Nutrition
  - Shrimp Farmers' Day

15:30 – 15:50 **Coffee Break II (Provided) (Poster Presenter Session)**

### Class Session II

- 15:50 – 17:20
- Management and Technology
  - Disease and Environment
  - Feed and Nutrition
  - Shrimp Farmers' Day

18:30 – 21:00 **President's Reception : Welcome Gala Dinner & MAI Awards 2017**

## SATURDAY, OCTOBER 28

07:00 – 10:00 **Registration Open**

### Class Session III

- 08:00 – 10:00
- Management and Technology
  - Genetic & Breeding
  - Shrimp Farmers' Day

10:00 – 10:20 **Coffee Break (Poster Presenter Session)**

### Class Session IV

- 10:20 – 12:20
- Management and Technology
  - Indonesian Session
  - Shrimp Farmers' Day

12:00 – 13:15 **Lunch (Provided) (Poster Presenter Session)**

### Plenary Session II

13:00 – 13:40 **Prof. Rokhmin Dahuri** (*President Indonesian Aquaculture Society*) CURRENT STATUS AND RECENT PROSPECTIVES OF AQUACULTURE DEVELOPMENT IN INDONESIA

13:40 – 14:20 **Dr. Nyan Taw** (*Shrimp Aquaculture Consultant, Base-Malaysia*) INNOVATIVE BIOFLOC TECHNOLOGY FOR SUSTAINABLE SHRIMP FARMING PRODUCTION: PRESENT AND FUTURE

14:20 – 15:00 **Sidrotun Naim, Ph.D** (*Director of Aqua Pathology Studies, Surya University*) DEVELOPMENT AND PROBLEM SOLVING OF WHITE FECES DISEASE IN *Litopenaeus vannamei*

15:00 – 15:40 **Albert G.J. Tacon, Ph.D** (*Aquatic Farms Ltd., Hawaii, USA*) NUTRITION RESEARCH UPDATE: FISHMEAL REPLACEMENT FOR SUSTAINABLE AND LOW-COST EFFECTIVE AQUAFEED

15:40 – 16:20 **Plenary Discussion** (Moderator: **Dr. Edward Danakusunah**)

16:20 – 16:30 **Closing Remark: President MAI (Prof. Rokhmin Dahuri)**

08:30 –  
17:30  
Exhibition  
Open



## MANAGEMENT & TECHNOLOGY

Saturday, October 28 10:20-12:00 Opal Room

### Session Chair 2

*Jacqueline M.F Sahetapy*

- 10:20 **Supono**  
PERFORMANCE OF INLAND SHRIMP CULTURE IN EAST LAMPUNG, INDONESIA (20 mins)
- 10:40 **Ating Yuniarti, M. Fakhri, Nasrullah Bai Arifin, and Anik M. Hariati**  
IDENTIFICATION, GROWTH CHARACTERISTIC AND ANTIMICROBIAL POTENCY OF CHLORELLA INDIGENOUS SHRIMP POND (20 mins)
- 11:00 **Sarjito, Catleya Kusuma Wardhani, Annisa Herlinawati, Alfabetian Harjuno Condro Haditomo, and Slamet Budi Prayitno**  
DIVERSITY OF GENUS *Octolasmis* INFESTATED ON MUD CRABS (*Scylla serrata*) FROM TRADITIONAL TAMBAK OF SURROUNDING SEMARANG GULF, INDONESIA (20 mins)
- 11:20 **Rina Puji Astuti, K. Maha Setiawati, Gede S. Sumiarsa, and Alim Isnansetyo**  
DEVELOPMENT, GROWTH AND REPRODUCTION CYCLE OF CALANOID COPEPOD (20 mins)
- 11:40 **H. Emi Fazlina\*, R. Nur Aqilah, M.A. Anis Amalina, R. Mohd Zulhairie, and K. Kazuhiro**  
PRELIMINARY STUDY ON THE EFFECTIVENESS OF SOIL EXTRACT SUPPLEMENTATION TOWARDS THE MICROALGAE GROWTH (20 mins)

## GENETIC & BREEDING

Saturday, October 28 08:00-10:00 Safire Room

### Session Chair

*Dwi Puji Hartono*

- 08:00 **Agnette Tjendanawangi, N. Dahoklory, and D. Malessi**  
EFFECT OF TYPE AND LEVEL OF MACROALGA IN MOISTURE PELLET TO GONAD QUALITY OF SEA URCHIN, *Tripneustes gratilla* (20 mins)
- 08:20 **Heppi Iromo and Awaluddin**  
THE REPRODUCING FEMALES OF THE MUD CRAB (*Scylla* sp.) IN TRADITIONAL PONDS, NORTH KALIMANTAN (20 mins)
- 08:40 **Wahidah, Dahlia, Amrullah, and Andi Puspasari Idris**  
EVALUATION OF THE SHAPE SYMMETRY OF THE GIANT FRESHWATER PRAWN (*Macrobrachium rosenbergii*) POPULATION OF WAELAWI RIVER AND KARIANGO RIVER (20 mins)
- 09:00 **Samliok Ndobe, Jamaluddin Jompa, and Abigail M. Moore**  
A TALE OF TWO URCHINS - IMPLICATIONS FOR IN-SITU BREEDING OF THE ENDANGERED BANGGAI CARDINALFISH (*Pterapogon kauderni*) (20 mins)