



Indonesian Aquaculture Society (IAS)

Initiative and invite for investors and shrimp aquaculture stakeholders

Biofloc Technology For Vannamei Farming Workshop 2018

Trainer:

Nyan Taw, Ph.D

Heny Budi Utari, Ph.D

Mr. Wayan Agus Edy

Innside Hotel

Yogyakarta, 28-31 October 2018

A good news for shrimp aquaculture stakeholders in the Asia Pacific Region that we present again to invite all of you business actors for vannamei shrimp farming to join the Workshop 2018 of Biofloc Technology For Vannamei Farming. The workshop with theme “*Let Producing Health and Profitable Vannamei Shrimp By Using Biofloc Technology (BFT)*” will be held on 28-31 October 2018 at Innside Hotel, Yogyakarta, Indonesia

The workshop will bring together world’s leading experts who will present many proven solutions to reduce risk to viral and bacterial disease infections, good ecosystem balance and management in shrimp farming. It is hoped that the event will be greatly beneficial for participants to generate a wealth of information from and apply these techniques for improving shrimp production in their aquaculture enterprises.

Who should attend? The workshop is intended for practicing shrimp farmers, farm technicians, progressive entrepreneurs, lecturers, researchers in R & D institutions, officers of the Department of Fisheries, and enterprising aquaculture students from Indonesia and overseas.

State of The Art

Shrimp farming industry is currently passing through a challenging phase, mostly because of disease outbreaks attributed by viral and bacterial infections (vibriosis). These are widespread in Indonesia and are feared to take new forms across diverse farming situations. Many shrimp farmers have no clue as to how this critical situation could be controlled. To manage these and the emerging challenges, farmers at the regional level need to be updated with the latest research, and also acquire adequate expertise and practical skills to efficiently organize their resources for achieving improved production levels. In fact, biofloc technology application is one of effective and economic solutions to reduce the risk of those disease in shrimp farming so far.

Biofloc is an emerging technology in aquaculture that will enable the sector to grow towards an environmental friendly approach. The microbial community developing in the system is able to rapidly utilize dissolved nitrogen leached from excretion of fish or shrimps and uneaten food and convert it into microbial proteins. Fish and shrimp use these microorganisms aggregated in "flocks" as additional feed source and this reduces FCR and consequently production costs. The BFT requires a minimal exchange of water and it will represent an excellent opportunity for the development of marine and freshwater aquaculture in the KSA. Furthermore, the reduced water exchange will decrease the risk of disease introduction in the culture environment, increasing the level of biosecurity in the aquaculture operations. Microorganisms in biofloc might partially replace protein content in diets or decrease its dependence of fishmeal.

Biofloc, a very recent technology seems a very promising for stable and sustainable production as the system has self-nitrification process within culture ponds with zero water exchange (Yoram 2000, 2005a, 2005b; Yoram et al., 2012). The technology has been successfully applied commercially with shrimp (*L. vannamei*) in Belize by Belize aquaculture (McIntosh 2000a, 2000b, 2000c and 2001). It also has been applied with success in shrimp farming in Indonesia, Malaysia (Taw 2004, 2005, 2008, 2010, 2012; Taw et al. 2011). A combination of two technologies, partial harvesting and biofloc, has been studied in northern Sumatra, Indonesia (Taw et al. 2008). A simple system incorporated with conventional autotrophic algae base considered as semi-biofloc has been successfully operated in Malaysia (Taw et al., 2013) and Myanmar (Taw and Tun, 2013).

The system has also been applied in super-intensive raceways production as high as over 10.0 kg/m² (Moss, 2006; Samocha, 2009,). It has also been applied in shrimp broodstock production (Chime, 2011). The technology is now applied for other species of shrimps such as *P. monodon* (Smith 2008) and freshwater prawn *Macrobrachium* in India. Presently, a number of studies by major universities and private companies are using biofloc as a single cell protein source in aquafeeds.

Recent studies revealed that more than 2,000 bacterial species were found in well-developed biofloc water. Bioflocs may enhance immune activity, based on mRNA expression of six immune-related genes, ProPO1, proPO₂, PPAE, ran, mas and SP1 (In-Kwon Jang, 2012). With emerging viral problems and rising costs for energy, biosecure with biofloc technology appears to be an answer for sustainable shrimp aquaculture production.

The workshop aims to provide participants with an exhaustive technical background on principles, benefits and management strategies of the biofloc technology applied

to sustain shrimp farming with focus on diseases prevention and control. A sustainable and good ecosystem balance in shrimp farming management will also be intensively discussed in the workshop.

Who is organizing the Program?

The workshop on *Biofloc Technology For Vannamei Farming* is organized by the Indonesian Aquaculture Society. Indonesian Aquaculture Society (IAS), a national non-profit and independent profession organization in aquaculture established in 2001, has played a key role in developing training and education of sustainable aquaculture technologies in Indonesia. This will be the 4th biofloc workshop program organized and hosted by IAS. The 3 previous workshops were successfully held by IAS in 2015 in Banyuwangi and Jakarta, and 2017 in Yogyakarta. The program is similarly with the intensive training program that had already been conducted by AIT (Asian Institute of Technology) on August 21-25, 2017 in Bangkok, Thailand.

Who is the Trainer?

Dr Nyan Taw. He received his Ph.D. in Marine Biology from the University of Tasmania, Australia under Colombo Plan Fellowship. He was head of R&D of Fisheries Corporation. In 1983, he became PM for ADB IFD Project and technical counter-part for JICA projects in Myanmar. In 1988, he joined the FAO of the UN and served in aquaculture projects in Indonesia, Vietnam and the Philippines culminating the position of Chief Technical Advisor. From 1995, Dr Nyan served as Sr Advisor/Production Director at a number of locations (East Java, Central Java & Sumbawa) in Indonesia. In 2002, he joined, CP Indonesia as VP where he initiated the biofloc technology. Later he served as SVP for Dipasena Group. In 2008, he joined Global Gen in Indonesia and supported shrimp SPF broodstock production. He served Blue Archipelago Berhad as STA /GM and developed a RAS biosecure, modular system intensive shrimp farm on 1,000 ha land from 2009 to 2015 in Malaysia. Dr. Nyan has provided consultancy for shrimp farming companies in Central and South American countries (Guatemala, Honduras, Nicaragua, Panama, Belize, Peru & Ecuador), Middle East (Saudi Arabia & Kuwait), Australia and Asia (Indonesia, Philippines, Vietnam, Thailand, India, China & Myanmar). He was as short-term consultant for FAO/World Bank Projects in Vietnam.

From 2014 he conducted Shrimp Biofloc Technology workshops for shrimp farmers in Australia (Shrimp Farmer Association), India (CMFRI), Saudi Arabia (FAO/SAS), Indonesia (MAI), Thailand (AIT) and Myanmar (EU). Dr Nyan had supervised 13 Master's theses for Zoology Department, Rangoon University and also published a book entitled '*Prawn Culture in Burma*' in 1984. He has published and presented over 80 papers and co-authored a chapter in the book by Yoram Avnimelech on *Biofloc Technology: A Practical Guidebook* (2012 & 2014).

Course Contents :

- Ecosystem balance in shrimp farming: A new innovative development practice
- Effective waste management practices in shrimp farming
- Bio secure shrimp production management practices
- Current disease trends in global vannamei farming
- Disease risk management in shrimp farming

- Advances, challenges and directions in shrimp disease control: past, present and future
- Shrimp disease diagnosis, control methods and its application
- Use of probiotic in shrimp farming: Essential or not?
- Biofloc Technology/Basic concepts and principles
- Management of microbial communities in biofloc systems
- Intensive shrimp farming in biofloc systems
- Biofloc technology in shrimp farming/Principles and practices
- Biofloc shrimp farm design and construction
- Shrimp farming practices: Complete and semi-biofloc systems
- Sustainable biofloc system management
- Use of probiotic in shrimp farming: essential or not?
- Economics of biofloc technology
- Field visit and discussion to Shrimp Farms at South Costal, Purworejo.

Course Duration: 29 – 31 October 2018

Course Venue

Course Venue is at Ininside Hotel, Yogyakarta, Indonesia.

Training Costs (3 working days all inclusive)per person:

400 USD (International)

360 USD (WAS member) *

4,000,000 IDR (Indonesian)

3,500,000 IDR (MAI member) *

Payable to 'Biofloc Workshop - ICAI 2018 ' by **20 October 2017**.

What's Included:

The fee covers training fee, an accommodation for 3 nights at Ininside Hotel, Yogyakarta (single deluxe room), welcome and farewell dinners, daytime meals, local transportation for field trips to shrimp farms and administrative fees.

What's Not Included:

Please note that the Training Fee does not cover any international travelling, visa fees, personal travelling, phone calls, medical or insurance charges, contingencies, or any other costs towards such personal effects and miscellaneous expenses. Please arrange sufficient additional funds for all such expenses.

Online Registration

Please visit <http://bit.ly/shrimpbiofloc>

**RUNDOWN, Workshop On
Biofloc Technology For Vannamei Farming
Yogyakarta, 29-31 October 2018**

Sunday, 28 October 2018

14:00 - 20:30	Registration & check in	IAS OC
---------------	-------------------------	--------

Monday, 29 October 2018

07:00 - 08:00	Registration	IAS OC
08:30 - 08:40	Welcome & Opening Speech	Prof. Rokhmin Dahuri – President MAI
08:40 - 09:30	Bio secure shrimp production management practices	Mr. Wayan Agus Edy
09:30 - 09:45	Questions and Answers	Participants
09:45 - 10:00	Coffee – Tea Break	OC
10:00 - 10:45	Effective waste management practices in shrimp farming	Mr. Wayan Agus Edy
10:45 - 11:00	Questions and Answers	Participants
11:00 - 12:00	Ecosystem balance in shrimp farming: A new innovative development practice	Mr. Wayan Agus Edy
12:00 - 12:15	Questions and Answers	Participants
12:15 - 13:00	Lunch Time (meals provided)	OC
13:00 - 13:45	Current disease trends in global vannamei farming	Dr. Heny Budi utari
13:45 - 14:00	Questions, answers and discussion	Participants
14:00 - 14:45	Disease risk management in shrimp farming	Dr. Heny Budi utari
14:45 - 15:00	Questions, answers and discussion	Participants
15:00 - 15:15	Coffee – Tea Break	
15:15 - 16:00	Advances, challenges and directions in shrimp disease control: past, present and future	Dr. Heny Budi utari
16:00 - 16:45	Shrimp disease diagnosis, control methods and its application	Dr. Heny Budi utari
16:45 - 17:15	Questions and answers	Participants
18:30 - 19:30	Dinner	OC

Tuesday, 30 October 2018

07:00 - 08:00	Registration	IAS OC
08:00 - 08:45	Biofloc Technology/Basic concepts and principles	Dr. Nyan Taw
08:45 - 09:30	Management of microbial communities in biofloc systems	Dr. Nyan Taw
09:30 - 10:00	Questions and Answers	Participants
10:00 - 10:15	Coffee – Tea Break	OC

10:15 - 11:00	Intensive shrimp farming in biofloc systems	Dr. Nyan Taw
11:00 - 11:45	Biofloc technology in shrimp farming/Principles and practices	Dr. Nyan Taw
11:45 - 12:15	Questions and Answers	Participants
12:15 - 13:00	Lunch Time (meals provided)	OC
13:00 - 13:45	Biofloc shrimp farm design and construction	Dr. Nyan Taw
13:45 - 14:30	Shrimp farming practices/Complete and semi-biofloc systems	Dr. Nyan Taw
14:30 - 15:00	Questions, answers and discussion	Participants
15:00 - 15:15	Coffee – Tea Break	OC
15:15 - 16:00	Use of probiotic in shrimp farming: Essential or not? Economic of biofloc technology	Dr. Nyan Taw
16:00 - 16:45	Sustainable biofloc system management	Dr. Nyan Taw
16:45 - 17:15	Questions and answers	OC
17:15 - 17:30	Taking photograph together for documentation	OC
18:00 – 20:00	Farewel Dinner (Goat beef satai of Klathakan)	OC

Wednesday, 31 October 2018

07:00 – 16:00	Field Trip to Intensive Shrimp Farming at South Coastal, Purworejo and field discussion	Participants Dr. Nyan Taw & OC
18:00 – 21:00	Free Time for Shoopng etc	Personally

FOR MORE INFORMATION

SMART SHRIMP FARMING BIOFLOC TECHNOLOGIES WORKSHOP

Secretariat Management Office

Indonesian Aquaculture Society

P.O. Box 8023 SMEL Semarang, Central Java
INDONESIA

Questions (Contact Persons):

Tel/ Fax : +62 24- 8318908

Wikke : +62 811 2994 598

Sonni : +62 857 4031 3146 (*WhatsApp*)
+62 81215916591

Email : aquacultureindonesia@gmail.com

Online Registration

Please visit <http://bit.ly/shrimpbiofloc>