

# FADHIL SYUKRI

Fish Biologist  
Breeding, Genetics and Genomic

Leveraging my expertise in Aquaculture since 2015 as a Senior Lecturer & Researcher at Universiti Putra Malaysia, I drive research to improve fish farm productivity and sustainability. My primary focus lies in fish breeding and larvae rearing of diverse species like seabass and carp. In 2017, I expanded my research to develop microdiet alternatives like FS feed ([www.thefsfeed.com](http://www.thefsfeed.com)) for early larval feeding, leading to enhanced survival rates and reduced life feed expenses for hatcheries raising carp, seabass, catfish, and shrimp. Furthermore, I collaborated with Iskandar Region Development Authority (IRDA) on a comprehensive feasibility study, analyzing the potential of adopting modern and sustainable agricultural practices in Iskandar Malaysia. This involved evaluating precision farming, IoT devices, drones, organic farming, agroforestry, water-saving techniques, regulatory frameworks, financial viability, and climate-resilient practices.



Personal Details			
Full Name	Muhammad Fadhil Syukri bin Ismail	(Title): Dr.	
MyCEP	CEP-SS0582	Citizenship: Malaysian	Gender: Male
Designation	Senior Lecturer	Date of Birth: 09/08/1983	IC No: 830809146243

## Career Highlights

### Early Career (2005-2007):

- **Shrimp Hatchery Assistant Project Manager (2005):**
  - Handled broodstock (*Penaeus monodon* & *Litopenaeus stylirostris*)
  - Managed breeding process, larvae rearing, and feeding regimes

### Master's Degree (2007-2011):

- **Universiti Putra Malaysia - MSc in Aquaculture**
  - Research topic: Reproductive hormone profiles of Malaysian mahseer (*Tor tambroides BLEEKER*) in captivity
  - Established breeding protocol for this threatened species, reducing dependence on wild broodstock

### PhD Studies (2011-2014):

- **Tohoku University - PhD in Aquaculture Genetics**
  - Research topic: Prediction of inbreeding depression by genetic markers in experimental fish (*Guppy Poecilia reticulata*)
  - Studied effects of full-sibling mating for several generations to predict outcomes in declining populations
  - Additional research:
    - Assessed stress response in salmon near Fukushima nuclear reactor
    - Produced salmon smolt for local release

### **Senior Lecturer: (2015-Present)**

- Head of Laboratory of Aquaculture Technology
- Head of Fish Hatchery and Demonstration Site (JICA)
- Head of Faculty Industrial Training, Faculty of Agriculture
- Tohoku University Research Collaborator, 2017
- Tokyo Institute of Technology Visiting Fellow, 2018
- Expert Matter in the field of Aquaculture
- Product Developer and Commercialization (FS Feed™)
- Perkhidmatan Cemerlang 2020, 2021, 2022
- Finalist for Teraju Superb 2020 and Winner 2021
- Agrobank-UPM Agriculture Certification Program (AU-ACP)

### **Technology and Networking (2015-Present):**

- **SATEPEPS-JICA Project Attachment Program:**
  - Collaborated with Tohoku University, Tokyo Institute of Technology, and Soka University
  - Gained exposure to various agricultural technologies, from seedling production to waste management
  - Close relationship with JICA Malaysia
- **Project with Iskandar Region Development Authority (IRDA), entitled:**
  - Feasibility study on the modern agriculture technology in Iskandar Malaysia (IM).
  - Area of Study:
    - Assess the feasibility of adopting modern agricultural technologies, such as precision farming, IoT devices, and drones, in IM agriculture.
    - Investigate the feasibility of implementing sustainable farming practices, such as organic farming, agroforestry, and water-saving techniques.
    - Analyse the regulatory framework and government policies related to modern agriculture in IM.
    - Assess the financial feasibility of transitioning to modern agriculture, considering initial investment costs, ongoing operational expenses, and potential returns.
    - Assess the feasibility of implementing climate-resilient agricultural practices to mitigate the impact of climate change.

### **Collaborations**

1. SATREPS-COSMOS (JST-JICA) (2016 – 2022) – A collaboration program between Malaysia Universities and Japanese Universities (Tokyo University, Tokyo Institute of Technology, and Soka University). COSMOS stands for Continuous Operation System for Microalgae Production Optimized for Sustainable Tropical Aquaculture. (<https://cosmos-satreps.org>). Our team's role was to utilize shrimp waste and produce clean ammonia through composting process. Sub-Group Grant – RM 6,000,000.00
2. SATREPS-OTEC (Science and Technology Research Partnership for Sustainable Development – Ocean Thermal Energy Conversion). The main purpose of this centre is to promote investment in the commercialisation of OTEC technology while developing research, innovation, and entrepreneurship. Our team's role was to culture and produce fingerling from the cold OTEC water systems. Sub-Group Grant – RM 1,808,962.00

## Qualifications

PhD	Tohoku University, Japan	2015	Fish Breeding and Genetics
MSc	Universiti Putra Malaysia	2010	Fish Endocrinology
BSc	Universiti Malaysia Sabah	2005	Aquaculture Science

## Technical Skills

- Histology
- Micro-injection
- Germs cell transplantation
- Work beyond office hours
- Hatchery Management
- ELISA
- SNP
- Larvae Rearing
- Microsatellite
- Gene Expression
- Open Water (PADI Diver)
- Fish Production
- Larvae Rearing
- Micro-feed
- Shrimp Culture

Malaysian Certified Environmental Professional: **CEP-SS0582**

## Language Proficiency

Language	Average	Good	Excellent
English			✓
Malay Language			✓
Japanese Language		✓	

## Recent Involvement in International Activities

Organization	Position	Start Date	End Date	Experience/ Expertise
Tokyo Institute of Technology	Research Fellow	March 2018	February 2020	Agriculture Waste Treatment
Japan International Cooperation Agency – JICA	Researcher	March 2017	April 2017	Acquisition of microbial community analysis in wastewater reactor
Japan International Cooperation Agency – JICA at Tokyo Institute of Technology	Researcher	March 2018	April 2018	Nutrient Recovery from Aquaculture Sludge and Microbial Community Analysis
The Japan International Cooperation Agency [JICA] Society of Malaysia (myJICA)	Vice President	July 2020	Jun 2024	Vice President of MyJICA
Ambassador of Japan	Birthday Celebration of His Majesty The Emperor of Japan	15 <sup>th</sup> February 2023	-	Malaysian Representative

SATREPS-COSMOS (JST-JICA)	Sub-Project Leader	March 2016	August 2022	Waste treatment in Aquaculture Sludge
SATREPS-OTEC (JICA)	Researcher	March 2020	March 2025	Culture and production of fingerling from the cold OTEC water systems

## Awards

- Malaysian Mahseer Hybrid (Gold), 2023 – Malaysian Technology Expo, 2023
- Malaysian Mahseer Hybrid (Gold), 2023 – 34<sup>th</sup> International Invention, Innovation & Technology Exhibition (ITEX)
- FS Feed (Gold). 2021 – 32<sup>nd</sup> International Invention, Innovation & Technology Exhibition (ITEX)
- FS Feed (Gold), 2019 – International Conference and Exposition on Inventions by Institutions of Higher Learning 2019 (PECIPTA'19).

## Intellectual Properties

- Trade Secret (T2019041601) - FS FEED for life food replacement in aquaculture industry, 2019.
- Trademark (TM2019019771 Class 31) – FS Feed, 2019
- Trade Secret (TS2023050201)-Manual Production of Kelah Lampam Hybrid
- Copyright (LY2023W02010) - Manual: Pengumpulan Enap Cemar Akuakultur /Udang
- Copyright (LY2023W02009) - Manual: Shrimp Aquaculture Sludge Collection
- Patent (Pending/PI20230071) - Feed composition for larvae of fish, crustaceans and other aquatic organisms and method thereof

## Recent Consultation / Expert Matter

No	Organization	Date/Year	Role
1.	Ministry of Education Malaysia	2019-2023	Facilitator for Assessment and Evaluation of Diploma Program at Vocational College (Tvet)
2.	Ministry of Economy - UPM	2023-2025	Ahli jawatankuasa pusat kecemerlangan industri pertanian inisiatif pendapatan rakyat (IPR-INTAN)
3.	Department of Environment Malaysia.	Dec 2022 to May 2025	Certified Subject Matter Expert for Environmental Impact Assessment (EIA)
4.	Impactive Malaysia	2022	Pilot Project Researcher For Fish Farming And Saltwater Livestock In Semporna, Sabah.
5.	Department of Agriculture Sarawak	2022	Freshwater fish seeding and breeding course.

6.	Kementerian Pertanian dan Industri Makanan	2022	Panel Pembangun Bengkel Bahan Pengajaran Bertulis - WIM, Siri 1/2022.
7.	Agrobank	2019, 2023	Agrobank-UPM Agriculture Certification Program (AU-ACP)
8.	Iskandar Region Development Authority	2023	Feasibility study on the modern agriculture technology in Iskandar Malaysia (IM)

### Selected Publications

1. Larval development of a new hybrid Malaysian mahseer (*Barbonymus gonionotus*♀ × *Tor tambroides*♂). M Azfar-Ismail, MS Kamarudin, F Syukri, K Latif. Aquaculture Reports 18, 100416, 2020
2. Association of annual hormonal profile with gonad maturity of mahseer (*Tor tambroides*) in captivity. F Syukri, SS Siraj, SK Daud, SA Harmin. General and comparative endocrinology 170 (1), 125-130, 2011
3. Effect of enzymatic pre-treatment on thermophilic composting of shrimp pond sludge to improve ammonia recovery. SZ Kamal, M Koyama, F Syukri, T Toda, QNM Tran, K Nakasaki. SZ Kamal, M Koyama, F Syukri, T Toda, QNM Tran, K Nakasaki. Environmental Research 204, 112299, 2022.
4. Inoculation of *Neurospora* sp. for improving ammonia production during thermophilic composting of organic sludge. M Koyama, A Kakiuchi, F Syukri, T Toda, QNM Tran, K Nakasaki. Science of The Total Environment 802, 149961, 2022.
5. Salinity effect on fry development of hybrid Malaysian (*Tor tambroides*♂ × *Barbonymus gonionotus*♀). SN Ain, A Christianus, A Ismail, NH Hassan, F Syukri. Songklanakarin Journal of Science & Technology 43 (3), 2021.
6. Other publications, please visit:  
[https://scholar.google.com/citations?hl=en&user=W\\_v0MooAAAAJ&view\\_op=list\\_works&alert\\_preview\\_top\\_rm=2&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=W_v0MooAAAAJ&view_op=list_works&alert_preview_top_rm=2&sortby=pubdate)