

Foreword

Welcome to the **Fourth Issue 2016** of the Journal of Tropical Agricultural Science (JTAS)!

The JTAS is an open-access journal on Tropical Agricultural Science published by Universiti Putra Malaysia Press. It is independently owned and managed by the university and runs on a non-profit basis for the benefit of the scientific community.

This issue contains **thirteen (13) articles** of which three are review articles, one a short communication while nine are regular papers. The authors of these articles hail from different countries, namely **Malaysia, Nigeria, India, Iraq, Iran, Pakistan, Japan and Indonesia**.

The first review paper briefly discusses on the major components available in fish immunity, such as the adaptive and innate immunity (*Firdaus-Nawi, M. and Zamri-Saad, M.*). The second review paper focuses on the ichthyofauna of the peat swamp forests (PSFs) of Malaysia. It provides a checklist of blackwater fish species in Malaysia from published literature, and addresses their importance to the economy, their conservation status and problems of PSFs (*Sule, H. A., Ismail, A. and Amal, M. N. A.*). The third review paper discusses impact of heat stress on Immune responses of livestock as well as the impact of climate change on the immune function of the animal (*Sophia Inbaraj, Veerasamy Sejian, Madijagan Bagath and Raghavendra Bhatta*). In the short communication, the authors provide a report, comparing the apparent metabolisable energy (AME) of three oil sources, namely palm oil (PO), soybean oil (SO), linseed oil (LO) and blend oil (BO), and their combination in broiler chickens diet (*Abdulla, N. R., Loh, T. C., Akit, H., Sazili, A. Q. and Foo, H. L.*).

The nine research articles cover a wide range of topics: A report on the stability analysis of panicle and grain traits of rainfed upland rice in two tropical ecologies of Nigeria (*Nassir, Adesola L. and Alawode, Yetunde O.*); the effect of cultivation techniques on the growth rate of marine microalgae species in the coastal waters of Kudat, Sabah, Malaysia (*Nurzafrah Mazlan and Ridzwan Hashim*); production and characterisation of cellulose from solid state fermentation of rice straw by *Trichoderma harzianum* SNRS3 (*Rahnama, N., Shah, U. K. M., Foo, H. L., Rahman, N. A. A., and Ariff, A. B.*); effects of higher density planting on irrigation water use and yield of sugarcane (*Khodadadi Dehkordi, D.*); effects

of feeding different levels of low crude protein diets with different levels of amino acids supplementation on layer hen performance (*Tenesa, M., Loh, T. C., Foo, H. L., Samsudin, A. A., Mohamad, R. and Raha, A. R.*); characterisation of plant growth-promoting bacteria from Kacip Fatimah (*Labisia pumila*) under natural tropical forest (*Yasmi, A., Radziah, O., Hawa, ZE. J., Zainal Abidin, M. A. and Qurban, A. P.*); impact of daily supplement of probiotic on the production performance of Akar Putra chickens (*Hasan, S. A. Jawad, Lokman, I. H., Saad, A. Naji, Zuki, A. B. Z. and Kassim, A. B.*); the effects of fermented feed on broiler production and intestinal morphology (*Saad A. Naji, Al-Zamili, I. F. B., Hasan, S. A. Jawad and Al-Gharawi, J. K. M.*); and characteristics and potential usage of dissolved silica in rice cultivation in Sumani watershed, Sumatra, Indonesia (*Hiroaki Somura, Drmawan, Kuniaki Sato, Makoto Ueno, Husnain, Aflizar and Tsugiyuki Masunaga*).

You will find the discussions intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend this journal to your colleagues and students.

I would also like to express my gratitude to all the contributors, namely the authors, reviewers and editors, who have made this issue possible. Last but not least, we record our appreciation to the staff at the journal division for their editorial assistance.

The JTAS is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry.

Chief Executive Editor

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