

# Foreword

Welcome to the third issue of 2026 of the *Pertanika Journal of Tropical Agricultural Science (PJTAS)*!

PJTAS is an open-access journal for studies in Tropical Agricultural Science published by Universiti Putra Malaysia Press. It is independently owned and managed by the university for the benefit of the world-wide science community.

This issue contains 28 articles: one short communication; seven review articles; and the rest are regular articles. The authors of these articles come from different countries namely Brunei Darussalam, Central America, China, India, Indonesia, Japan, Korea, Malaysia, Philippines, Saudi Arabia, Taiwan, The Gambia, Thailand, and Vietnam.

The regular article entitled “Influence of Mother Palm Age and Harvesting Maturity Seed Nut on Seed Quality and Germination of Aromatic Pandan Coconut” reports on strategies to optimise the germination performance and seed quality of the Aromatic Green Dwarf (AROD) variety. To address the low germination rates typically observed under commercial practices, the study evaluated the synergistic effects of mother palm age (10 years versus 30 years) and harvesting maturity stages at 10, 11, and 12 pollinations (MAP) for germination. Comprehensive assessments over four months, measuring final germination rate, germination index, mean germination time, germination rate index, time spread, and seedling vigour index, revealed that harvesting at an earlier maturity stage of 10 MAP significantly enhanced seed viability. Specifically, aromatic pandan coconut seed nuts collected at 10 MAP achieved the highest final germination rates for both 10-year (60.7%) and 30-year (65.3%) mother palms, demonstrating that strategic harvest timing can substantially enhance nursery success and support high-quality planting material production. Further details of this study can be found on page 1095.

The article titled “SSR Markers for Verifying Crosses and Assessing Whitefly Resistance in Soybean Breeding Programme” focuses on establishing a robust molecular selection technique to identify true hybrids during the hand-pollination phase of soybean breeding. In this research, the whitefly-susceptible soybean variety Anjasmoro was crossed with resistant donor germplasms, IAC 100 and G100H. Whitefly resistance across parental lines and 46 F<sub>1</sub> progenies was evaluated in greenhouse settings using a free-choice host test, while molecular

verification of true crosses was executed using the specific SSR marker Satt045. The findings showed severe leaf damage reaching up to 84.7% in Anjasmoro and unsuccessful crosses, which precisely mirrored the genetic banding pattern of the susceptible parent. Conversely, true hybrid offspring exhibited significantly reduced leaf damage and a combined parental banding pattern, underscoring that combining greenhouse resistance screening with SSR marker analysis offers a highly reliable framework for accelerating whitefly-resistant crop development. Full details of this study are available on page 1157.

The review article titled “Methionine, Lysine and Tryptophan Optimisation in Broiler Nutrition: Functional Roles, Supplementation Strategies and Feed Crop Biofortification” presents an integrated overview of precision nutrition approaches designed to support high-quality lean tissue growth, feed efficiency, and immune performance in sustainable poultry production. The authors examine the critical functional roles of key limiting amino acids, detailing how methionine (Met) drives protein synthesis and antioxidant defences, lysine (Lys) controls muscle and carcass development, and tryptophan (Trp) regulates appetite, stress adaptation, and serotonin synthesis. Beyond short-term precision feed formulations utilising crystalline amino acids to balance low-crude-protein (CP) commercial diets, the paper comprehensively evaluates long-term solutions such as agricultural biofortification, transgenic approaches, and CRISPR/Cas genome editing to intrinsically improve the nutritional profiles of baseline feed crops like maize, soybean, and rice. The synthesis highlights the necessity of multi-omics feeding trials and integrated agro-economic frameworks to successfully adopt these sustainable broiler nutrition strategies globally. Further detailed information can be found on page 1363.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

All the papers published in this edition underwent Pertanika’s stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers and Editorial Board Members of PJTAS, who have made this issue possible.

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

**Editor-in-Chief**

Md Kamal Uddin