

Foreword

Welcome to the fourth issue of 2025 for 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 15 articles: two review articles; one short communication; and the rest are regular articles. The authors of these articles come from different countries namely Afghanistan, Indonesia, Ireland, Malaysia, Nigeria and Thailand.

A selected article entitled “Prevalence and Risk Factors of Bubaline Subclinical Mastitis in Selected Peninsular Malaysian States” assessed 12 buffalo farms in Selangor, Kedah, and Penang to determine the prevalence and risk factors of subclinical mastitis (SCM) in Malaysian dairy buffaloes. Using the California Mastitis Test, the SCM prevalence was found to be 29.7% at the quarter level and 40.1% at the animal level. Quarter-level prevalence varied significantly across states, with the highest in Penang. Significant risk factors associated with SCM included a history of mastitis (animal level), lack of pre- and post-teat dipping, and the absence of other dairy animals (farm level). The findings reflect a high prevalence of SCM in buffaloes and the factors that can be considered in developing effective SCM prevention and control measures. The detailed information of this article is available on the page 1071.

A study by Ying Ju Tan and team entitled “Acute and Subacute Toxicity Assessment of Crude Aqueous Extract of *Melastoma malabathricum* Leaves” evaluated the safety of *Melastoma malabathricum* (MM) crude aqueous extract through acute and subacute oral toxicity tests in female Sprague Dawley rats. A single acute dose of 3000 mg/kg showed no signs of toxicity or mortality over 14 days. In the subacute study, rats were administered daily doses of 100, 500, and 1000 mg/kg for 28 days, with no significant changes observed in behavior, physical appearance, body weight, blood parameters, organ weights, or liver histology compared to the control group. The results indicate that MM crude aqueous extract is non-toxic and safe for oral use at the tested doses. Full information on this study is presented on the page 1093.

A regular article entitled “Effects of Tamanu Kernel Cake from Plantation By-product on Ruminal Digestibility and Methane Emission” evaluated the use of tamanu kernel cake (TKC), a by-product of tamanu oil production, as a protein substitute in ruminant

concentrate diets. The concentrate was formulated to contain ~15% crude protein and ~65% total digestible nutrients, with TKC replacing conventional protein sources at 0% (T0), 50% (T1), and 100% (T2), and a fourth treatment (T3) adding 0.5% mineral salt to T2. Using in vitro rumen incubation (Tilley and Terry method), the results showed no significant differences in dry matter and organic matter digestibility or in ruminal total VFA and ammonia concentrations across treatments. However, T2 and T3 significantly reduced methane emissions compared to T0 ($p < 0.05$), with no additional effect from mineral salt in T3. The study concludes that TKC can replace up to 100% of conventional protein sources and reduce methane emissions without compromising digestibility or fermentation. Further details of this study are found on the page 1151.

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, Editor-in-Chief 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

Mohamed Thariq Hameed Sultan