Please read the Pertanika guidelines and follow these instructions carefully. Manuscripts not adhering to the instructions will be returned for revision without review. The Chief Executive Editor reserves the right to return manuscripts that are not prepared in accordance with these guidelines.

MANUSCRIPT PREPARATION

Manuscript Types
Pertanika accepts submission of mainly four types of manuscripts for peer-review.

1. **Regular article**

   Regular articles are full-length original empirical investigations, consisting of introduction, materials and methods, results and discussion, conclusions. Original work must provide references and an explanation on research findings that contain new and significant findings.

   **Size:** Generally, these are expected to be between 6 and 12 journal pages (excluding the abstract, references, tables and/or figures), a maximum of 80 references, and an abstract of 100–200 words.

2. **Review article**

   These report critical evaluation of materials about current research that has already been published by organizing, integrating, and evaluating previously published materials. It summarizes the status of knowledge and outline future directions of research within the journal scope. Review articles should aim to provide systematic overviews, evaluations and interpretations of research in a given field. Re-analyses as meta-analysis and systemic reviews are encouraged. The manuscript title must start with "Review Article:"

   **Size:** These articles do not have an expected page limit or maximum number of references, should include appropriate figures and/or tables, and an abstract of 100–200 words. Ideally, a review article should be of 7 to 8 printed pages.

3. **Short communications**

   These are usually between 2 and 4 journal pages and have a maximum of three figures and/or tables, and an abstract length not exceeding 100 words. Information must be in short but complete form and it is not intended to publish preliminary results or to be a reduced version of Regular or Rapid Papers.

4. **Others**

   Brief reports, case studies, comments, concept papers, Letters to the Editor, and replies on previously published articles may be considered.

**PLEASE NOTE: NO EXCEPTIONS WILL BE MADE FOR PAGE LENGTH.**

Language Accuracy
Pertanika emphasizes on the linguistic accuracy of every manuscript published. Articles must be in English and they must be competently written and argued in clear and concise grammatical English. Contributors are strongly advised to have the manuscript checked by a colleague with ample experience in writing English manuscripts or a competent English language editor.

**Author(s) must provide a certificate** confirming that their manuscripts have been adequately edited. A proof from a recognised editing service should be submitted together with the cover letter at the time of submitting a manuscript to Pertanika. **All editing costs must be borne by the author(s).** This step, taken by authors before submission, will greatly facilitate reviewing, and thus publication if the content is acceptable.

Linguistically hopeless manuscripts will be rejected straightaway (e.g., when the language is so poor that one cannot be sure of what the authors really mean). This process, taken by authors before submission, will greatly facilitate reviewing, and thus publication if the content is acceptable.

MANUSCRIPT FORMAT

The paper should be submitted in one column format with at least 4cm margins and 1.5 line spacing throughout. Authors are advised to use Times New Roman 12-point font and MS Word format.

1. **Manuscript Structure**

   Manuscripts in general should be organised in the following order:
Page 1: Running title
This page should only contain the running title of your paper. The running title is an abbreviated title used as the running head on every page of the manuscript. The running title should not exceed 60 characters, counting letters and spaces.

Page 2: Author(s) and Corresponding author information.
This page should contain the full title of your paper not exceeding 25 words, with name(s) of all the authors, institutions and corresponding author's name, institution and full address (Street address, telephone number (including extension), hand phone number, and e-mail address) for editorial correspondence. First and corresponding authors must be clearly indicated.

The names of the authors may be abbreviated following the international naming convention. e.g. Salleh, A.B.¹, Tan, S.G²*, and Sapuan, S.M³.

Authors’ addresses. Multiple authors with different addresses must indicate their respective addresses separately by superscript numbers:

George Swan¹ and Nayan Kanwal²
¹Department of Biology, Faculty of Science, Duke University, Durham, North Carolina, USA., ²Office of the Deputy Vice Chancellor (R&I), Universiti Putra Malaysia, Serdang, Malaysia.

A list of number of black and white / colour figures and tables should also be indicated on this page. Figures submitted in color will be printed in colour. See “5. Figures & Photographs” for details.

Page 3: Abstract
This page should repeat the full title of your paper with only the Abstract (the abstract should be less than 250 words for a Regular Paper and up to 100 words for a Short Communication), and Keywords.

Keywords: Not more than eight keywords in alphabetical order must be provided to describe the contents of the manuscript.

Page 4: Introduction
This page should begin with the Introduction of your article and followed by the rest of your paper.

2. Text
Regular Papers should be prepared with the headings Introduction, Materials and Methods, Results and Discussion, Conclusions, Acknowledgements, References, and Supplementary data (if available) in this order.

MAKE YOUR ARTICLES AS CONCISE AS POSSIBLE

Most scientific papers are prepared according to a format called IMRAD. The term represents the first letters of the words Introduction, Materials and Methods, Results, and Discussion. It indicates a pattern or format rather than a complete list of headings or components of research papers; the missing parts of a paper are: Title, Authors, Keywords, Abstract, Conclusions, and References. Additionally, some papers include Acknowledgments and Appendices.

The Introduction explains the scope and objective of the study in the light of current knowledge on the subject; the Materials and Methods describes how the study was conducted; the Results section reports what was found in the study; and the Discussion section explains meaning and significance of the results and provides suggestions for future directions of research. The manuscript must be prepared according to the Journal’s instructions to authors.

3. Equations and Formulae
These must be set up clearly and should be typed double spaced. Numbers identifying equations should be in square brackets and placed on the right margin of the text.

4. Tables
All tables should be prepared in a form consistent with recent issues of Pertanika and should be numbered consecutively with Roman numerals. Explanatory material should be given in the table legends and footnotes. Each table should be prepared on a new page, embedded in the manuscript.

When a manuscript is submitted for publication, tables must also be submitted separately as data - .doc, .rtf, Excel or PowerPoint files - because tables submitted as image data cannot be edited for publication and are usually in low-resolution.

5. Figures & Photographs
Submit an original figure or photograph. Line drawings must be clear, with high black and white contrast. Each figure or photograph should be prepared on a new page, embedded in the manuscript for reviewing to keep the file of the manuscript under 5 MB. These should be numbered consecutively with Roman numerals.

Figures or photographs must also be submitted separately as TIFF, JPEG, or Excel files - because figures or photographs submitted in low-resolution embedded in the manuscript cannot be accepted for publication. For electronic figures, create your figures using applications that are capable of preparing high resolution TIFF files. In general, we require 300 dpi or higher resolution for coloured and half-tone artwork, and 1200 dpi or higher for line drawings are required.

Failure to comply with these specifications will require new figures and delay in publication.
NOTE: Illustrations may be produced in colour at no extra cost at the discretion of the Publisher; the author could be charged Malaysian Ringgit 50 for each colour page.

6. References

References begin on their own page and are listed in alphabetical order by the first author's last name. Only references cited within the text should be included. All references should be in 12-point font and double-spaced.

NOTE: When formatting your references, please follow the APA reference style (6th Edition). Ensure that the references are strictly in the journal's prescribed style, failing which your article will not be accepted for peer-review. You may refer to the Publication Manual of the American Psychological Association for further details (http://www.apastyle.org/).

7. General Guidelines

Abbreviations: Define alphabetically, other than abbreviations that can be used without definition. Words or phrases that are abbreviated in the introduction and following text should be written out in full the first time that they appear in the text, with each abbreviated form in parenthesis. Include the common name or scientific name, or both, of animal and plant materials.

Acknowledgements: Individuals and entities that have provided essential support such as research grants and fellowships and other sources of funding should be acknowledged. Contributions that do not involve researching (clerical assistance or personal acknowledgements) should not appear in acknowledgements.

Authors’ Affiliation: The primary affiliation for each author should be the institution where the majority of their work was done. If an author has subsequently moved to another institution, the current address may also be stated in the footnotes.

Co-Authors: The commonly accepted guideline for authorship is that one must have substantially contributed to the development of the paper and share accountability for the results. Researchers should decide who will be an author and what order they will be listed depending upon their order of importance to the study. Other contributions should be cited in the manuscript's Acknowledgements.

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Footnotes: Current addresses of authors if different from heading may be inserted here.

Page Numbering: Every page of the manuscript, including the title page, references, tables, etc. should be numbered.

Spelling: The journal uses American or British spelling and authors may follow the latest edition of the Oxford Advanced Learner's Dictionary for British spellings.

SUBMISSION OF MANUSCRIPTS

Owing to the volume of manuscripts we receive, we must insist that all submissions be made electronically using the online submission system ScholarOne™, a web-based portal by Thomson Reuters. For more information, go to our web page and click "Online Submission".

Submission Checklist

1. MANUSCRIPT: Ensure your MS has followed the Pertanika style particularly the first four pages as explained earlier. The article should be written in a good academic style and provide an accurate and succinct description of the contents ensuring that grammar and spelling errors have been corrected before submission. It should also not exceed the suggested length.

2. COVER LETTER: All submissions must be accompanied by a cover letter detailing what you are submitting. Papers are accepted for publication in the journal on the understanding that the article is original and the content has not been published or submitted for publication elsewhere. This must be stated in the cover letter. Submission of your manuscript will not be accepted until a signed cover letter (original pen-to-paper signature) has been received.

The cover letter must also contain an acknowledgement that all authors have contributed significantly, and that all authors are in agreement with the content of the manuscript. The cover letter of the paper should contain (i) the title; (ii) the full names of the authors; (iii) the addresses of the institutions at which the work was carried out together with (iv) the full postal and email address, plus telephone numbers and emails of all the authors. The current address of any author, if different from that where the work was carried out, should be supplied in a footnote.

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