



# Guide for Authors

## Agriculture and Natural Resources (ANRES)

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## 1 Field and scope

**Agriculture and Natural Resources** is a peer-reviewed, international, scientific journal containing review articles and research articles, from all areas related to agricultural disciplines. It covers original, previously unpublished research regarding any theories and practices that are related to agricultural applications. Submitted articles are examined by a scientific committee and anonymous evaluators. The Journal is published every two months (January, March, May, July, September and November) in HTML and PDF formats. **Agriculture and Natural Resources** is produced by Kasetsart University. The following areas are specifically covered in the Journal:

- Biodiversity, Environment, Ecology
- Bio-resource, Genetics and Genomic
- Agricultural Biotechnology, Biochemistry and Microbiology
- Soil, Water and Environmental Sciences
- Plant Sciences (Agronomy, Horticulture, Forestry, etc.)
- Plant Protections and Natural Products  
(Entomology, Plant Pathology, Biological Controls, Pest Controls, etc.)
- Animal Sciences, Fisheries, Aquaculture, and Veterinary Sciences (including Pets and Wildlife)
- Agricultural Technology, Logistics, Engineer, and Data Sciences
- Food Sciences and Industry

### Note:

- All manuscripts must be consistent with the Journal's manuscript preparation requirements.
- Only research results using a scientific approach are accepted for publication. (agricultural research using social science approaches is not accepted.)
- Natural Product Manuscripts

Manuscripts reporting biological activities of crude extracts will only be considered for publication in ANRES if they report a profound application or utilization of plants or microorganisms. Reported active constituents must be purified to homogeneity with complete spectroscopic characterization. It is highly recommended that the biological activities of pure compounds be reported along with those of the crude extracts. GC-MS or LC-MS profilings must be accompanied by preparative separation of active compounds with a complete characterization.

Please note the required spectroscopic characterization data for pure compounds are:

1.  $^1\text{H}$  NMR spectra
2.  $^{13}\text{C}$  NMR spectra
3. High-resolution mass spectra (HRMS) or elemental analysis

## 2 Editorial board

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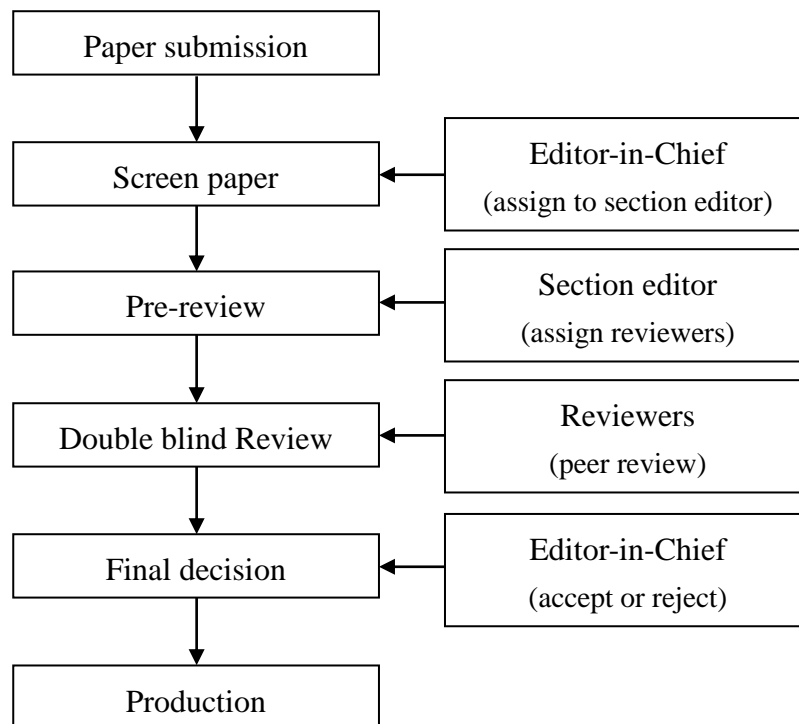
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Kasetsart University, Bangkok, Thailand

Ratikorn Smithmaitrie

Kasetsart University Research and Development Institute,  
Kasetsart University, Bangkok, Thailand

### 3 Peer review process

All submitted manuscripts are screened by the Scientific Editor for importance, substance, appropriateness for the Journal, general scientific quality and the amount of new information provided. Those failing to meet current standards are rejected without further review. Those meeting these initial standards are sent to expert referees for peer review. The identities of referees are not disclosed to the author (single blind review). Referee comments are reviewed by the Editor-in-chief and the editorial board (after allowing the author to make changes in response to the referee's comments) and the Editor-in-chief then either accepts or rejects the manuscript and informs the corresponding author of the final decision. However, publication is subject to successful completion of any follow-up requested by the native-speaking English Editor. **The review process ordinarily is completed within 4–6 months. If the process is delayed beyond that point, the corresponding author will be notified** (Fig. 1).



**Fig. 1** Peer review process

### *Rejected manuscripts*

Rejected manuscripts including original illustrations and photographs will be returned to authors. Authors must understand that the main aim of the submission to publication process is to improve the overall quality of the authors' work. They must take rejections positively and use the reviewers' comments to improve their manuscripts.

Before sending the manuscript, it is the duty of the author(s) to understand the scope of the journal and make sure the topic of the manuscript fulfills the journals' requirements. This will allow for avoiding unnecessary delays.

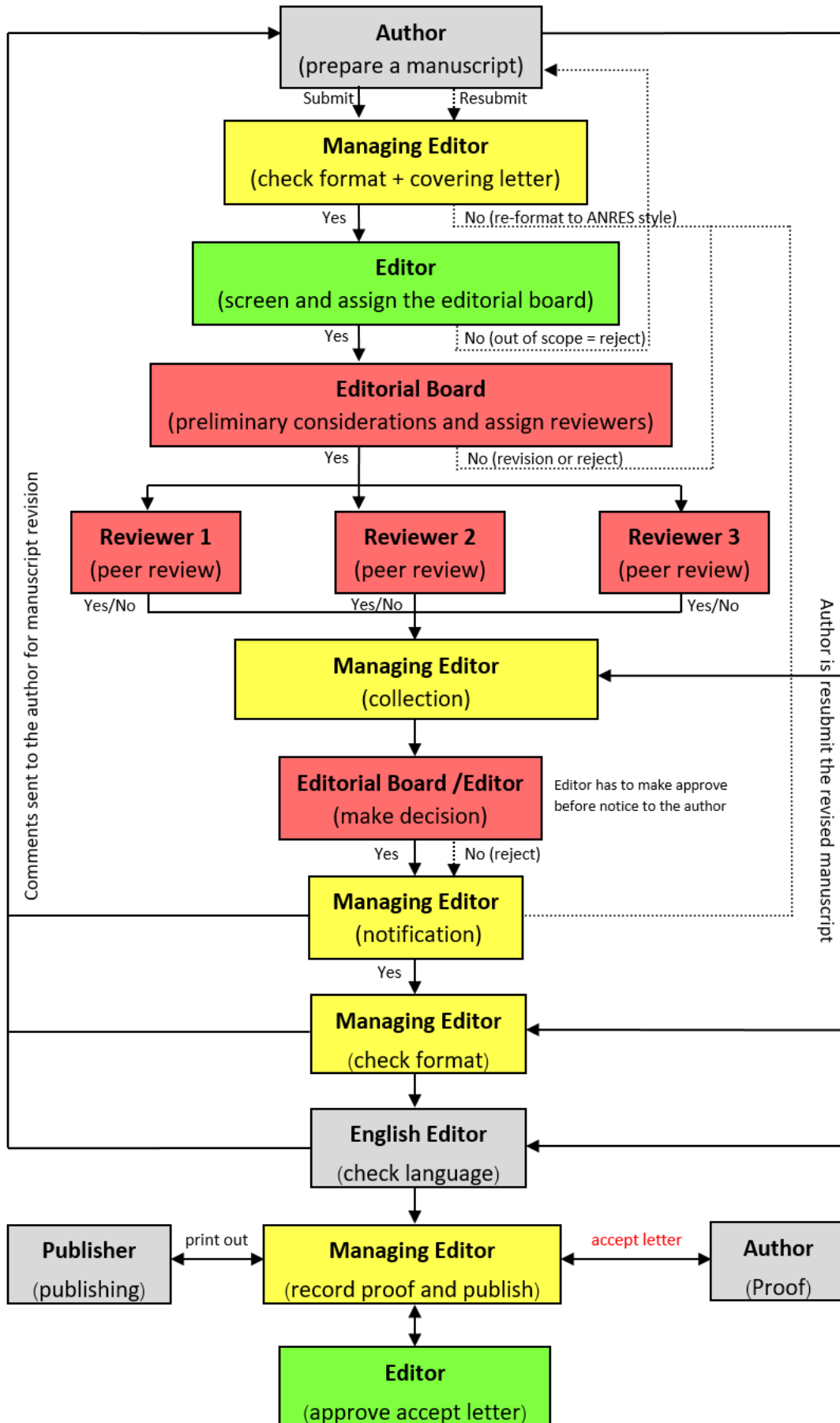
### *Accepted manuscripts*

The corresponding author will be asked to review a copyedited page proof. The corresponding author is responsible for all statements appearing in the galley proofs. The corresponding author will be informed of the estimated date of publication.

## **4 Publishing process and timing**

Editorial process (4–6 months)

- |  |            |
|--|------------|
| 1) Author submission                           |            |
| 2) Format checking and aim and scope screening | 1 week     |
| 3) Section editor process                      | 3 weeks    |
| 4) Reviewer process                            | 1–2 months |
| 5) Revision process                            | 3–4 weeks  |
| 6) Edition process                             | 1 month    |
| 7) Production process                          | 2 weeks    |





## 5 Submission items

Accepted file types:

- [Cover letter](#) in Microsoft Word doc or docx file or PDF file with e-Signature
- [Title page](#) in Microsoft Word doc or docx file
- [Manuscript](#) in Microsoft Word doc or docx file include tables and/or figures
- [Supplementary](#) in Microsoft Word doc or docx file (if any)

**Data in tables should not duplicate material in the text or illustrations. Figures are provided in JPEG, PNG, TIFF, or EPS. Place all tables and figures at the end of the manuscript after the references.**

All manuscripts must be consistent with the Journal's manuscript preparation requirements. Submit the following items:

### 5.1 Cover letter

In part of cover letter form, the corresponding author must sign the publishing agreement on behalf of all the listed authors. Authors should confirm that the work is original and has not been published elsewhere nor is it currently under consideration for publication elsewhere. Please explain in your own words the significance and novelty of the work, the problem that is being addressed, and why the manuscript belongs in this journal. The author can use the cover letter template provided at our website: [anres.kasetsart.org](http://anres.kasetsart.org) (Word file download). [Click here to download a "Template of Cover letter"](#)

### 5.2 Title page

The title page is the first page of the manuscript and should be submitted in a separate Word document from the manuscript. This page should include all the information of the contents of the article type, the article title, author name(s), author affiliation(s), keywords (up to 5), and Corresponding author section. In part of title page, the corresponding author and the order of authors both cover letter and ScholarOne system must be same. All author names should be written in the same way both mentioned in title page and ScholarOne system that authors use for submission. The author can use the title template provided at our website: [anres.kasetsart.org](http://anres.kasetsart.org) (Word file download).

[Click here to download a "Template of Title page"](#)

[Click here to download an "Example of Title page"](#)

### 5.3 Manuscript

Agriculture and Natural Resources accepts Microsoft Word file types (doc or docx) for article text. Set 1.5 line spacing for all components of the manuscript except tables (sometime use 1 line spacing), using 12 points of Times New Roman font. Submitted manuscripts must be less than 18 pages, without author

details. (including article type, the article title, abstract, keywords, introduction, materials and methods (ethics statements), results, discussion (or results and discussion), conflict of interest statement, acknowledgments, and all references, figures, tables).

Abstracts must not exceed 250 words. Subdivision sections should divide your article into clearly defined sections. Any subsection may be given a brief heading. Each heading should appear on its own separate line. Level I headings are bold and Level II headings are italic.

The author can use the manuscript template provided at our website: [anres.kasetsart.org](http://anres.kasetsart.org) (Word file download). [Click here to download a “Template of Manuscript”](#)

List of video guides prepare manuscript

- Go to the web address <https://www.youtube.com/watch?v=WqF76UkOdOE> for changing the line spacing in a portion of the document
- Go to web address <https://www.youtube.com/watch?v=aD6W-yWsjLI> for setting 1 inch margins

### Article type

- Research Article/ Review Article

In ANRES journal, there are three types of article published such as research article, review article, short communication. Author must to much enough study and good prepare your manuscript before you submit, it's important that you planning to write an original research article and check the instructions for authors and the aims and scope of the journal/s you'd like to submit to. Original research articles are often the first thing you think of when you hear the words 'journal article'. In reality, research work often results in a whole mixture of different outputs and it's not just the final research article that can be published.

### Research article

Original research articles are the most common type of journal article. They're detailed studies reporting new work and are classified as primary literature. You may find them referred to as original articles, research articles, research, or even just articles, depending on the journal. These articles will include Abstract, Introduction, Materials and Methods, Results, Discussion, and Conclusion sections.

### Review article

Review articles provide critical and constructive analysis of existing published literature in a field. They're usually structured to provide a summary of existing literature, analysis, and comparison. Often, they identify specific gaps or problems and provide recommendations for future research.

Unlike original research articles, review articles are considered as secondary literature. This means that they generally don't present new data from the author's experimental work, but instead provide analysis or

interpretation of a body of primary research on a specific topic. Secondary literature is an important part of the academic ecosystem because it can help explain new or different positions and ideas about primary research, identify gaps in research around a topic, or spot important trends that one individual research article may not.

### Article title

- Bold font. Only the first word is capitalized unless the word usually is capitalized.

Example:

**Application of electrical voltage to reduce microbial and floret drop in cut orchids (*Dendrobium candidum*) during display**

### Author Names

- Always list the author's surname before listing his or her initials
- You only need to provide initials for the first and middle names, but do include initials for all middle names provided by the source
- Include a comma after every last name and in-between different authors' names
- Include a period after every initial
- Author names are spelled out in full and separated by commas
- Family name (surname) appears last
- Affiliations are indicated by superscripted letter placed before the comma
- If an author has more than one affiliation, the superscripted lower letters are separated by a comma (closed up)
- There is an asterisk (\*) to indicate the corresponding author
- Always close the \*Corresponding author with one period
- There is an obelisk (†) to indicate the equal contribution(s) of authors to a published work
- See examples above

Example:

Skorn Koonawootrittriron<sup>a</sup>, Supawadee Poompuang<sup>b,†</sup>, Uthairat Na-Nakorn<sup>b,†,\*</sup>

<sup>a</sup> Department of Animal Science, Faculty of Agriculture, Kasetsart University, Bangkok 10900, Thailand

<sup>b</sup> Department of Aquaculture, Faculty of Fisheries, Kasetsart University, Bangkok 10900, Thailand

<sup>†</sup>Equal contribution.

\*Corresponding author.

E-mail address: ffishurn@ku.ac.th (U. Na-Nakorn)

### Author affiliations

- Each affiliation starts a new line and has complete details including the city, post code and country
- Do not include the street address in this section
- Corresponding letters linking each affiliation to authors are placed at the beginning of each affiliation
- There is no period at the end of the affiliations

#### Example:

<sup>a</sup> Kasetsart University Research and Development Institute, Kasetsart University, Bangkok 10900, Thailand

<sup>b</sup> Department of Genetics, Faculty of Science, Kasetsart University, Bangkok 10900, Thailand

### Keywords

- Note “**Keywords:**” as the heading (left-align and bold, note there is a terminal colon)
- Keywords are in alphabetical order and separated by a comma
- There is no period after the last keyword
- Up to five (5) keywords are allowed
- In keywords, only the first word is capitalized (unless other words are a proper noun, species name, etc.)

### Corresponding author section

Co-authors must agree on who will take on the role of corresponding author. It is then the responsibility of the corresponding author to reach consensus with all co-authors regarding all aspects of the article, prior to submission. This includes the authorship list and order, and list of correct affiliations.

The corresponding author is also responsible for liaising with co-authors regarding any editorial queries. And, they act on behalf of all co-authors in any communication about the article throughout: submission, peer review, production, and after publication. The corresponding author signs the publishing agreement on behalf of all the listed authors.

The purpose of having a corresponding author is that the editor has only one point of contact with whom he/she communicates and does not have to correspond with multiple authors. Although you are the first author, ideally you should not write to the editor if you are not the corresponding author. Since the editor is already in communication with the corresponding author, your writing to him/her may just lead to

confusion. The corresponding author can write to the editor again asking for a status update, there is nothing wrong with that. In fact, the corresponding author can follow up with the editor once every 3–4 weeks.

The order of authors on a scientific paper needs to be determined after careful deliberation. Prior to deciding the author order, it is important to understand the concept of a first and a corresponding author. At the time of submission of a manuscript, journals require you to choose one of the authors as the corresponding author. The corresponding author is the one who receives all notifications from the journal including manuscript status, reviewers' comments, and the final decision. Although journals usually perceive the role of a corresponding author as purely administrative, this role is associated with seniority in some cultures. The corresponding author is often the group leader or a senior researcher whose contact address is not likely to change in the near future. In cases where the main contributor of the study is also the group leader, he or she can be both the first and corresponding author for the study.

- “\*Corresponding author.” followed by the corresponding author’s email address. (asterisk is not superscripted)
- E-mail address is on the next line. “E-mail address” is hyphenated, and there are no hyperlinks
- There are no telephone/fax numbers and no mailing address
- There is a co-responding name after e-mail

### Abstract

- There is an “**Abstract**” heading (left-align and bold)
- Abstracts must not exceed 250 words
- Informative abstract includes: importance of the work, objectives, materials and methods, results, and main finding (it is crucial that important numerical results must be provided.)
- Importance of the work, explain in brief of how importance is your research. What is a research gap? What exactly a research question? (not more than 20 words)
- Objectives, state the objectives of the research. (not more than 20 words)
- Materials & Methods, explain only important information about materials and methods to enable the reader understand the approach used for answering your research question(s). (not more than 50 words)
- Results, present the results according to the objective(s) include important numerical data. (not more than 120 words)
- Main finding, give a conclusion of main finding of the work and point out what is new and/or how does the finding contribute to advancement of the field or how does the finding be applied. (not more than 40 words)

- Where a term/definition is continually referred to, it is written in full when it first appears, followed by the subsequent abbreviation in parentheses; thereafter, the abbreviation is used
- Do not use the first person
- Use the past tense unless describing something that is independent of time

Example:

**Importance of the work:** The high nutritive value and multiple functional components of green tea waste (GTW) could be used as alternative feedstuff for ruminants.

**Objectives:** To investigate the effects of different levels of GTW supplementation on in vitro gas production, ruminal digestion and fermentation characteristics.

**Materials & Methods:** The experiment followed a completely randomized design with a 2×3 factorial arrangement of treatments with a control. The control treatment was total mixed ration (TMR) without any supplementation. Factor A was the type of GTW (containing fresh or dried GTW; FGTW and DGTW, respectively), and factor B was the level of GTW addition in TMR at rates of 5%, 10% or 15% on a dry matter (DM) basis.

**Results:** There was no interaction between the type and level of GTW supplementation on in vitro gas production, gas kinetics and ruminal fermentation end products, except for the in vitro digestibility of nutrients. Compared with the control, the addition of GTW resulted in significantly higher levels of in vitro gas production, in vitro digestibility of DM and organic matter (IVDMD and IVOMD), and total volatile fatty acid (VFA). Furthermore, the DGTW supplementation showed higher levels of gas production, IVDMD, IVOMD, ruminal NH<sub>3</sub>-N and total VFA concentration compared with FGTW, particularly when 10–15% GTW was added.

**Main finding:** GTW could be effectively used as ruminant feed and the addition of DGTW in the TMR could enhance gas production, ruminal digestion and fermentation end products. Further in vivo study is needed to evaluate the use of GTW on animal performance.

### Section Headings

- Original articles generally use these Level I headings (bold) such as Introduction, Materials and Methods, Results, Discussion, Acknowledgments, References
- Depending on the manuscript, there may be Level II headings (italic)
- Depending on the manuscript, there may be Level III headings (italic and single tab)
- Review Articles headings may be more flexible but should be appropriate to each section of the article
- Level I headings: bold font, with a single line of space before it and a single line of space after it
- Level II headings: only the first word is capitalized, in italic font, with a single line of space before it and no lines of space after it
- Level III headings: Single tab, only the first word is capitalized, in italic font, with a single line of space before it and no lines of space after it

- But if it follows immediately after a Level II heading, then there are no lines of space before it and no lines of space after it

### Paragraphs

- First paragraph under any level of section heading is indented
- Subsequent paragraphs are indented

### Abbreviations

- Where a term/definition is continually referred to, it is written in full when it first appears, followed by the subsequent abbreviation in brackets (even if it were previously defined in the abstract); thereafter, the abbreviation is used
- Ensure that an abbreviation so defined does actually appear later in the text (excluding in figures/tables), otherwise, if used only once then spell it in full
- Abbreviations list (Please refer to: Dorland's Medical Abbreviations. Philadelphia: Saunders, 1992.)
- ANRES abbreviations (with both singular and plural use) for time are: **s** = second; **min** = minute; **hr** = hour, **d** = day, **wk** = week; **mo** = month; **y** = year

### Drug Names

- The generic term for all drugs and chemicals should be used, unless the specific trade name of a drug is directly relevant to the discussion

### Gene nomenclature

- Current standard international nomenclature for genes should be adhered to
- Genes should be typed in italic font

### Numbers

- Numbers that begin a sentence or those < 10 that is, one to nine are spelled out as words
- Laboratory parameters, time (24 hour format = **0800 hours**), temperature, length, area, mass, and volume are expressed using digits
- Centuries and decades are written using digits  
**Example:** the **1980s** or **19<sup>th</sup> century** (note use of superscript and no apostrophe for the "s")
- Numbers within parentheses are expressed in digits even if < 10
- A comma is used as a thousand separator except for wavelengths (no separator)  
**Example:** **10,581; 6,293,470**

## Statistics

“Author always remember that you have all the required raw data, you need to statistically prove your hypothesis. Representing your numerical data as part of statistics in research will also help in successful the stereotype of publish paper. Furthermore, the results acquired from research project are meaningless raw data unless analysed with statistical tools. Therefore, determining statistics in research is of utmost necessity to justify research findings and you should explain clearly a using statistical methods for your research which could help draw meaningful conclusion to analyse research”

- In your studies, the standard deviation and the estimated SEM are used to present the characteristics of sample data and explain statistical analysis results.
- **SD (standard deviation) or/and SE (standard error) are accepted terms that do need to be defined**
- Mean values should be accompanied with " **$\pm$  SD**" to indicate variation within the considered group (presented as deviation bars in graphs)
- Estimated values should be accompanied with " **$\pm$  SE**" to indicate error of the considered estimate (presented as error bars in graphs)
- If a general linear model was used, all factors and their assumptions should be declared
- Results of mean comparisons should be shown in tables and figures wherever applicable.
- **Student's t test** NOT Student's t-test and no italics and similarly for **F test**
- **$\chi^2$  test** NOT chi-squared test [note:  $\chi$  is NOT in italics]
- ANOVA is spelled out in full as **analysis of variance** (no capitals)
- ANCOVA is spelled out in full as **analysis of covariance** (no capitals)
- For sample size, use an italicized lower case letter, with a space on either side: ***n = 36***
- For p values, use an italicized lower case letter, with a space on either side: ***p < 0.05***; ***p = 0.562***
- **p** should NEVER start a sentence: so use **A *p* value < 0.05 was taken to be significant.**
- There is always a zero before a decimal point, **0.75** NOT .75

## Units

- Système International (SI) units are used  
<http://chemed.chem.purdue.edu/genchem/topicreview/bp/ch1/index.php#derivsi>
- The metric system is used for the expression of length, area, mass and volume
- Note the time abbreviations listed under segment Abbreviations above
- Temperatures are given in degrees Celsius, **33°C** (no space between number and degree symbol)



**Examples:**

Heat activation at 95°C for 5 min in the beginning, followed by 35 cycles of denaturation at 95°C for 1 min each, annealing temperatures that vary for each primer according to Table 1 for 1 min, extension at 72°C for 1 min, and a final extension at 72°C for 10 min.

- Virgule (/) is used: 74 beats/min NOT 74 beats min<sup>-1</sup>
- Either use: 74 beats per minute (all full words) or 74 beats/min (virgule and abbreviation) but apply a consistent style. Note that non SI units are spelled in full and take a plural “s”
- Liter always has a capital letter: mL/s

Miscellaneous style points

- Use *e.g.* or *i.e.* only in tables or figures where space is tight (note: use italics and no comma, so NOT e.g., (not with a comma) and in normal text, spell these term in full = for example, that is
- 95% confidence interval (CI)...
- Avoid recurring sets of brackets and use square brackets for nesting [using round bracket (like this) inside square brackets]
- Italicize all foreign-language terms, such as *in vivo*, *in vitro*, *in utero*, *en bloc*, *etc.*
- Italicize species names: *Klebsiella pneumoniae* and *Escherichia coli* were found in...
- Superscripted ordinal qualifiers after numbers: 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>
- Use en dashes for ranges in text and do not repeat the unit: 25–30°C
- Use en dashes for ranges of page number in reference segment Agr. Nat. Resour. 1: 23–39.
- Use closed-up em dashes for parenthetical dashes: Three species—*E. grandis*, *E. viminalis* and *E. obliqua*—were studied.
- Do not use an “Oxford comma”, which is the comma before the “and” at the end of a list of three or more items, so NOT *E. grandis*, *E. viminalis*, and *E. obliqua*
- Use repetitive/serial units: 60%, 74% and 25% NOT 60, 74 and 25%
- Contractions do not have end period: Dr NOT Dr. and Prof NOT Prof.
- Quotations: use double quotes, but use single quotes for quotes within a quote
- For equipment, software, chemical reagents, the complete details of the manufacturer should be provided, separated by semicolons and including the state, if applicable, as well as the country: Statistical analysis used the SPSS software (version 11; SPSS Inc.; Chicago, IL, USA).
- OR if the name of the product appears within parentheses: (SPSS version 11; SPSS Inc., Chicago, IL, USA)

## Equations

- Present simple formulae in the line of normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g.,  $X / Y$  (note there is always a space either side of an operand such as +, -, / or  $\times$ )
- In principle, variables are to be presented in italics
- Powers of e (Euler's number) are often more conveniently denoted by exp.
- Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text)
- Equations and mathematical expressions should be provided in the main text of the paper
- Equations that are referred to in the text are identified by parenthetical numbers, such as (1), and are referred to in the manuscript as "Equation 1".
- Insert equations using the tool in Microsoft Word
- Equation: "Equation" not "equation" or "eq."

You can insert equations in one of the two ways listed below.

If you have already composed your article as .docx and used its built-in equation editing tool, your equations will become images when the file is saved down to .doc. To resolve this problem, re-key your equations in one of the two following ways.

Use MathType to create the equation. MathType is the recommended method for creating equations. Go to Insert > Object > Microsoft Equation 3.0 and create the equation. If, when saving your final document, you see a message saying "Equations will be converted to images", your equations are no longer editable and we will not be able to accept your file. (Fig. 1)

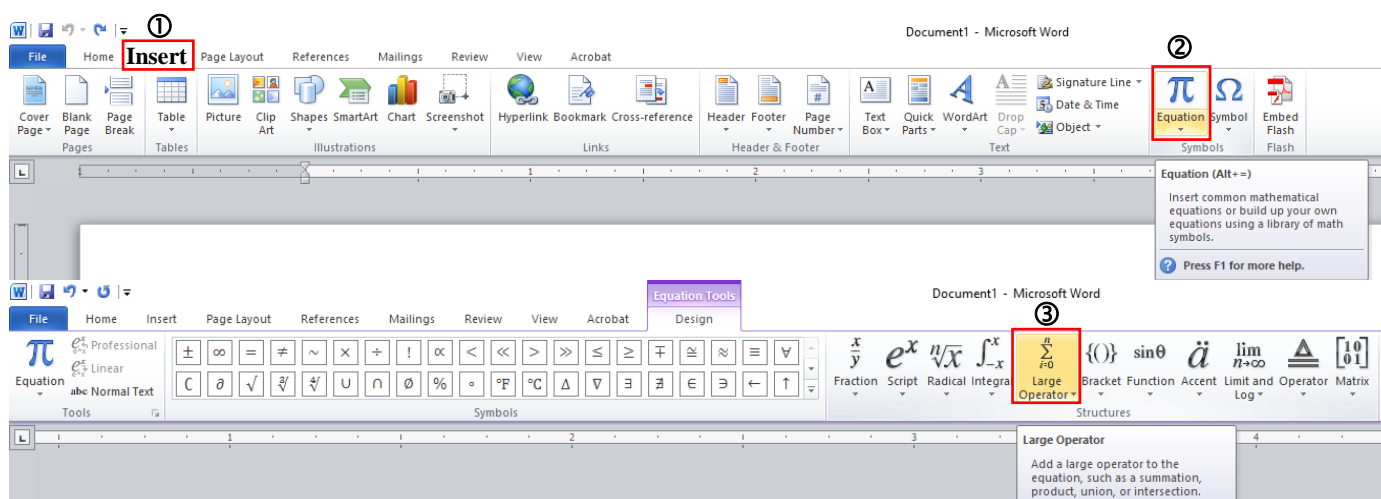


Fig. 2 How to use MathType to create the equation

Examples:

The polymorphism information content (PIC) was calculated based on polymorphism scoring from SSR and SNP analysis using Equation 1:

$$PIC = 1 - \sum_{i=1}^k P_i^2 - 2 \sum_{i=1}^k \sum_{j=i+1}^k p_i^2 P_j^2 \quad (1)$$

where  $P_i^2$  is the genotype frequency of the  $i^{\text{th}}$  allele and  $P_j^2$  is the genotype frequency of the  $j^{\text{th}}$  allele and  $k$  is the number of markers.

**DO NOT use separate lines for the superscript and subscript components**

$$PIC = 1 - \sum_{i=1}^k P_i^2 - 2 \sum_{i=1}^k \sum_{j=i+1}^k P_i^2 P_j^2 \quad (1)$$

**DO NOT use text boxes and “float them above or below the main equation**

$$PIC = 1 - \sum_{i=1}^k P_i^2 - 2 \sum_{i=1}^k \sum_{j=i+1}^k P_i^2 P_j^2 \quad (1)$$

### Ethics Statements

Research using human, animal or biosafety subjects must include required ethics statements in the Materials and Methods section.

Examples:

1. Animal care and all experimental procedures were approved by [*insert name of Committee and Institution*] (Approval no. \_\_\_\_\_).
2. This study was approved by the Ethics Committee of [*insert name of Institution*] (Approval no. \_\_\_\_\_).

### Conflict of Interest Statement

Please provide a conflict of interest statement. If there is no conflict of interest, state that.

## Acknowledgements

- Level I section heading “**Acknowledgements**” (left-align and bold and is spelled with an “e” after the “g”)
- Positioned after main body of text, before the references
- Include an honorific for all people named **Professor, Asst. Prof, Dr, Mr, Mrs, Ms** (no period after the abbreviation)
- Do not use the first person (no “I” or “we” as the subject of a sentence)

## References

- Citation in text, figure legends, and tables.

Author have to write intentionally citation in text, figure legends, and tables. Narrative citations intertwine the author as part of the sentence with the year of publication (in parentheses) following. Parenthetical citations include the author(s) and the date of publication within parentheses. Writing format of the in-text citation must to follow as the Table 1. Citation with well-known abbreviations as authors must to follow as the Table 2.

**Table 1** Writing format of the in-text citation as shown in the table below

Type of citation in text	Narrative format	Parenthetical format
One author	Walker )2007(	)Walker, 2007(
Two authors	Walker and Smith )2004(	)Walker and Smith, 2004(
Three authors or more	Walker et al. )2004(	)Walker et al., 2004(

Adapted from “The Chicago Manual of Style, 17<sup>th</sup> ed.” by The University of Chicago. 2017.

**Table 2** Citation with well-known abbreviations of authors

Type of citation in text	First citation	Subsequent citations
Parenthetical citation	There are risks inherent in drinking tap water (Centers for Disease Control [CDC], 2002).	There are risks inherent in drinking tap water (CDC, 2002).
Narrative citations	The Centers for Disease Control investigated the risks inherent in drinking tap water (CDC, 2002).	

- An abstract should not be cited unless it is the only available reference to an important concept
- References are chronologically ordered and then year ordered
- Multiple references are separated by a semi-colon (;)

- Uncompleted work or work that has not yet been accepted for publication (“unpublished data”, “personal communication”) must not be cited as references

➤ In References section

- References are limited to those cited in the text and listed in alphabetical order
- The last names and all initials of all the authors up to eight (8) should be included, but when authors number more than eight (8), list the first three (3) authors only, followed by “et al.”
- Abbreviations for journal names should conform to those used in MEDLINE. Journal Title Abbreviations can be found in the internet, a source list is provided in Table 3

**Table 3** Journal Title Abbreviations

Journal Title Abbreviations	
Source List	Link
1. Web of Science	<a href="https://images.webofknowledge.com/images/help/WOS/A_abrvjt.html">https://images.webofknowledge.com/images/help/WOS/A_abrvjt.html</a>
2. Berkeley library university of California	<a href="https://guides.lib.berkeley.edu/bioscience-journal-abbreviations/a-b">https://guides.lib.berkeley.edu/bioscience-journal-abbreviations/a-b</a>
3. Elsevier	<a href="https://www.elsevier.com/__data/promis_misc/BMCL_Abbreviations.pdf">https://www.elsevier.com/__data/promis_misc/BMCL_Abbreviations.pdf</a>
4. The CAS Source Index (CASSI) Search Tool	<a href="https://cassi.cas.org/search.jsp">https://cassi.cas.org/search.jsp</a>
5. The International Standard Serial Number (ISSN)	<a href="https://www.issn.org/services/online-services/access-to-the-ltwa/#recherche">https://www.issn.org/services/online-services/access-to-the-ltwa/#recherche</a>
7. National Laboratory Medicine	<a href="https://www.ncbi.nlm.nih.gov/sites/books/NBK7253/">https://www.ncbi.nlm.nih.gov/sites/books/NBK7253/</a>

- The journal type reference should include, in order: author names (e.g. Smith, J.). year. article title, journal name, volume and inclusive page numbers
- For an in press article, the article must have been accepted for publication and the journal name and, if possible, the year and volume, must be provided
- **If referencing a website, then author information, article title, website address and date the site was accessed must be provided**
  - Use en dashes (–) to indicate page number such as **pp. 51–59**
  - **DO NOT** use a hyphen or minus (-) **NOT** “pp. 51-59”
- Authors' name, use this form: **Author, A.A., Author, B.B., Author, C.C.** year. List author’s surname and followed by abbreviation of first name )include middle name(.
- Use “et al.” for author more than 9 person after the 3<sup>rd</sup> author name, for example Zhu, F., Chen, J., Xiao, X., **et al.** 2016.

- Use En dash – (for number ranging such as “14: 153–175, pp. 54–62”)
- Title name: for book; use capitalize for first letter each word, for article; use capitalize for first letter of first word except special name
- About location: The name of United States and territories are abbreviated in the reference list. To cite locations outside the United States, spell out the city and the country names. For example, [New York, NY, USA](#); [Oxford, UK](#); [Gaithersburg, MD, USA](#); [London, UK](#); [Bangkok, Thailand](#); [Vienna, Austria](#)
- If the original version is not English, provide original language in square bracket after the reference, for example [Jin Thai](#)[, [\[in Indonesian\]](#), [\[in German\]](#)

### Examples

#### *Journal publication:*

If a journal article has a DOI, include the DOI in the reference. Always include the issue number for a journal article. If the journal article does not have a DOI and is from an academic research database, end the reference after the page range (for an explanation of why, see the database information page).

#### a. Journal article with doi link

If article is an open access article, the author should provide the doi link

[Costa, B.H.G., de Resende, M.L.V., Monteiro, A.C.A., Ribeiro Júnior, P.M., Botelho, D.M.D.S., Silva, B.M.D. 2018. Potassium phosphites in the protection of common bean plants against anthracnose and biochemical defence responses. J. Phytopathol. 166: 95–102. doi.org/10.1111/jph.12665](#)

[Graf, S., Egert, S., Heer, M. 2011. Effects of whey protein supplements on metabolism: Evidence from human intervention studies. Curr. Opin. Clin. Nutr. Metab. Care. 14: 569–580. doi: 10.1097/MCO.0b013e32834b89da](#)

#### b. Journal article without doi link

[Blanchard, M.G., Runkle, E.S. 2006. Temperature during the day, but not during the night, controls flowering of Phalaenopsis orchids. J. Exp. Bot. 57: 4043–4049.](#)

[Chantiratikul, A., Borisuth, L., Chinrasri, O., Saenthaweesuk, N., Chookhampaeng, S., Thosaikham, W., Sriart, N., Chantiratikul, P. 2016. Evaluation of the toxicity of selenium from hydroponically produced selenium-enriched kale sprout in laying hens. J. Trace Ele. Med. Biol. 35: 116–121.](#)

\*\*The list of abbreviations used for journal titles:

<https://guides.lib.berkeley.edu/bioscience-journal-abbreviations>

<https://www.library.caltech.edu/journal-title-abbreviations>

[https://images.webofknowledge.com/WOK48B5/help/WOS/A\\_abrvjt.html](https://images.webofknowledge.com/WOK48B5/help/WOS/A_abrvjt.html)

<https://www.ncbi.nlm.nih.gov/nlmcatalog/journals/>

## c. Journal article that has not a abbreviation name

Arakawa, T., Timasheff, S.N. 1982. Stabilization of protein structure by sugars. *Biochemistry* 21: 6536–6544. doi.org/10.1021/bi00268a033

Myers, N., Mittelmeier, R.A., Mittelmeier, C.G., da Fonseca, G.A.B. Kent, J. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403: 853–858. doi.org/10.1038/35002501

*Book:*a. *Book*

Wyn, J.R.G., Brady, C.G., Speirs, J. 1981. *Recent Advances in the Biochemistry of Cereals*. Academic Press. London, UK.

b. *Book with edition*

Association of Official Analytical Chemists. 2000. *Official Methods of Analysis*, 17<sup>th</sup> ed. The Association of Official Analytical Chemists. Gaithersburg, MD, USA.

Strunk, Jr., W., White, E.B. 1979. *The Elements of Style*, 3<sup>rd</sup> ed. Macmillan. New York, NY, USA.

c. *Chapter in an edited book*

Hodgson, R.W. 1967. The citrus industry. In: *Horticultural Varieties of Citrus*. University of California Press. Berkeley, CA, USA, pp. 23–45.

Kurland, L.T. 1970. The epidemiologic characteristics of multiple sclerosis. In: Vinken, P.J., Bruyn, G.W. (Eds.). *Handbook of Clinical Neurology, Vol 9: Multiple Sclerosis and Other Demyelinating Diseases*. North-Holland Publishing. Amsterdam, the Netherlands.

Loth, G.R., Hemgesberg, L.B. 1999. How to prepare an electronic version of your article. In: Jones, B.S., Smith, R.Z. (Eds.). *Introduction to the Electronic Age*. E- Publishing Inc. New York, NY, USA, pp. 281–304.

Mettam, G.R., Adams, L.B. 1999. How to prepare an electronic version of your article. In: Jones, B.S., Smith, R.Z. (Eds.). *Introduction to the Electronic Age*. E- Publishing Inc. New York, NY, USA, pp. 281–304.

*Conference proceedings:*

Liu, C., Peng, D., Yang, Y. 2010. Anti-oxidative and anti-aging activities of collagen hydrolysate. In: *Proceedings of 3<sup>rd</sup> International Conference on Biomedical Engineering and Informatics*. Yantai, China, pp. 23–45.

Johnson, R.R., Herrero, M.P. 1981. Corn pollination under moisture and high temperature stress. In: Loden H.D., Wilkinson, D. (Eds.). *Proceedings of 36<sup>th</sup> Annual Corn and Sorghum Industry Research Conference*. Chicago, IL, USA, pp. 66–77.

*Research report:*

Vergara, B.S., Pateña, G., Lopez, F.S.S. 1982. Rapid generation advance of rice at the International Rice Research Institute, IRRI Research Paper Series No. 84. International Rice Research Institute. Los Baños, Philippines.

*Thesis:*

Isnaeni, N.F. 2007. Product formulation of pure instant potatoes [*Ipomoea batatas* (L.) Lam] as one of staple food diversification. M.Sc. thesis, Faculty of Agricultural Technology, Bogor Agricultural University. Bogor, Indonesia.

*Website: (no hyperlinks)*

The author must be provide the specific link that the reader can access the directly information (no homepage link) and provide the date of searching the data at the end of text. See an example below;

*a. Web page*

Robinson, G.S., Ackery, P.R., Kitching, I.J., Beccaloni, G.W., Hernández, L.M. 2010. HOSTS - A database of the World's lepidopteran hostplants. Natural History Museum. London, UK.  
<http://www.nhm.ac.uk/our-science/data/hostplants/>, 24 March 2019.

*b. Web sources with no author*

International Waterlily and Water Gardening Society. 2016. IWGS new waterlily competitions.  
<https://iwgs.org/new-waterlily-competition/>, 20 November 2016.  
University of Glasgow. Climate change is affecting the way Europe floods, experts warn.  
[https://www.gla.ac.uk/news/headline\\_681850\\_en.html](https://www.gla.ac.uk/news/headline_681850_en.html), 19 October 2019.

*References another language:*

If the references were translated to English, the author must be providing the original language in bracket at the end of text see an example below.

Bleeker, P. 1850. Contribution to the knowledge of the ichthyological fauna of Borneo, with description of 16 new species of freshwater fishes. *Nat. Tijdschr. Ned. Ind.* 1: 1–16. [in Dutch]  
Farahita, Y., Kurniawati, J.N. 2012. Nilem caviar chemical characteristics immersed in a mixture of acetic acid and salt solution during cold storage temperature (5–10 °C). *JPK Universitas Padjadjaran* 3: 165–170. [in Indonesian]  
Laichanthuek, P., Sukmasuang, R., Duengkae, P. 2017. Population and habitat use of gaur (*Bos gaurus*) around Kha Phaeng Ma Non-hunting Area, Nakhon Ratchasima Province. *Journal of Wildlife in Thailand* 24: 83–95. [in Thai]



## Tables

- Place the table after reference
- Tables are numbered consecutively, in the order of their citation in the text
- Citations in text: see Table 1; see Tables 1 and 2; see Tables 1–3; (Table 1); (Tables 1 and 2); (Tables 1–3)
- Table caption example: **Table 1** Properties of microencapsulated *Litsea cubeba* essential oil (LCEO) in  $\beta$ -cyclodextrin (BCD) using paste method (note: “**Table 1**” in bold font; no end period after caption)
- Column and row headings: only first word is capitalized
- Use en dashes (–) for empty entries
- Tables that include statistical analysis of data should describe their standards of error analysis and ranges in the table caption.
- Footnotes are indicated using these symbols (in order of appearance): \*, †, ‡, §, ||, ¶, #, \*\*, ††, ‡‡ (note: when > 10 footnotes, use superscripted lowercase letters) Do not use a symbol if it is required for any other scientific use in the table (for example, the asterisk may be used to indicate significance levels where \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$ )
- Footnotes are separated by semi-colons
- Abbreviations used in the table, even when already defined in the text, should be defined and placed after the footnotes or in the caption if appropriate and presented like in this example: CT = computed tomography; MRI = magnetic resonance imaging. (note the use of “=” with a space on either side, a semi-colon to separate items and include an end period to indicate the list is completed)
- Use the multiplication symbol (not the lower case letter x) for magnification after the number, e.g. 100×
- Citations like Table 1A and 1B are not allowed—either they are combined into one table or split into two tables
- Please submit tables in your main article document in an editable format (Word or TeX/LaTeX, as appropriate), and not as images.

**Example:****Table 1** Fatty acid concentration of *Cyberlindnera subsufficiens* NG8.2 oil produced in various kinds of oil production media when incubated for 5 days

Fatty acids	% (weight per weight)		
	Synthetic high C/N medium	OPEFBH-G medium	OPEFBH-CSH medium
Lauric acid (C12:0)	3.83±0.02 <sup>a</sup>	0 <sup>b</sup>	0 <sup>b</sup>
Myristic acid (C14:0)	1.30±0.01 <sup>b</sup>	1.99±0.02 <sup>a</sup>	1.23±0.00 <sup>c</sup>
Palmitic acid (C16:0)	38.99±0.07 <sup>b</sup>	40.31±0.19 <sup>a</sup>	23.92±0.02 <sup>c</sup>
Palmitoleic acid (C16:1)	9.50±0.02 <sup>c</sup>	10.41±0.03 <sup>b</sup>	18.51±0.03 <sup>a</sup>
Steric acid (C18:0)	17.16±0.21 <sup>a</sup>	15.62±0.14 <sup>b</sup>	1.47±0.13 <sup>c</sup>
Oleic acid (C18:1)	22.31±0.27 <sup>b</sup>	22.13±0.23 <sup>b</sup>	44.13±0.01 <sup>a</sup>
Linoleic acid (C18:2)	5.49±0.01 <sup>b</sup>	5.27±0.04 <sup>c</sup>	10.32±0.06 <sup>a</sup>
Others	1.42±0.00 <sup>b</sup>	4.27±0.00 <sup>a</sup>	0.42±0.00 <sup>c</sup>

OPEFBH-G = oil palm empty fruit bunch hydrolysate-glucose; OPEFBH-CSH = oil palm empty fruit bunch hydrolysate-cassava starch hydrolysate

Data are shown as the mean ± SD, derived from three independent experiments. Means in a row superscripted with different lowercase letters are significantly ( $p < 0.05$ ) different.

**Table 2** Comparison of main effects of organic acids on quantity and quality parameters of strawberries

Organic acid	Yield (g/plant)	Fruit protein (mg/g)	Peroxidase (units)*	Proline (mM/L)	Membrane stability index (%)
Control	11.13±1.23 <sup>b</sup>	0.15±0.09 <sup>ab</sup>	0.043±0.013 <sup>a</sup>	0.70±0.06 <sup>b</sup>	79.71±2.06 <sup>a</sup>
Humic acid	11.25±1.29 <sup>b</sup>	0.16±0.11 <sup>a</sup>	0.023±0.008 <sup>b</sup>	0.82±0.07 <sup>a</sup>	79.89±2.1 <sup>a</sup>
Glutamine	14.48±1.44 <sup>a</sup>	0.13±0.08 <sup>b</sup>	0.013±0.004 <sup>c</sup>	0.67±0.06 <sup>b</sup>	79.91±2.11 <sup>a</sup>
Arginine	11.08±1.11 <sup>b</sup>	0.14±0.09 <sup>b</sup>	0.017±0.006 <sup>c</sup>	0.68±0.06 <sup>b</sup>	75.22±1.98 <sup>b</sup>

\* = peroxidase expressed in micro moles of H<sub>2</sub>O<sub>2</sub> consumed per minute per milligram of protein.

Mean ± SD values with different lowercase superscripts are significantly ( $p < 0.05$ ) different.

**Table 3** Total phenolic and total flavonoid contents of *Derris indica* extracts from different plant parts and solvents and the two-way analysis of variance table showing effects of plant parts (PP), the solvent used (S) and their interaction

Plant part	Solvent	Total phenolic content (mg GAE)/g CE	Total flavonoid content (mg RU/g CE)		
Leaf	Hexane	0.051±0.011 <sup>j</sup>	1.894±0.185 <sup>b</sup>		
	Ethyl acetate	0.258±0.015 <sup>fg</sup>	1.534±0.016 <sup>c</sup>		
	Methanol	0.322±0.032 <sup>cd</sup>	0.759±0.059 <sup>hi</sup>		
Flower	Hexane	0.021±0.004 <sup>j</sup>	0.938±0.150 <sup>gh</sup>		
	Ethyl acetate	0.428±0.022 <sup>a</sup>	0.693±0.033 <sup>i</sup>		
	Methanol	0.307±0.022 <sup>de</sup>	0.429±0.024 <sup>j</sup>		
Pod	Hexane	0.263±0.040 <sup>fg</sup>	1.405±0.146 <sup>cd</sup>		
	Ethyl acetate	0.364±0.045 <sup>b</sup>	1.056±0.071 <sup>fg</sup>		
	Methanol	0.346±0.045 <sup>bc</sup>	0.774±0.013 <sup>hi</sup>		
Twig	Hexane	0.124±0.015 <sup>i</sup>	1.303±0.017 <sup>de</sup>		
	Ethyl acetate	0.233±0.014 <sup>gh</sup>	1.165±0.232 <sup>ef</sup>		
	Methanol	0.280±0.026 <sup>ef</sup>	0.523±0.024 <sup>j</sup>		
Bark	Hexane	0.126±0.006 <sup>i</sup>	1.474±0.035 <sup>cd</sup>		
	Ethyl acetate	0.203±0.025 <sup>h</sup>	2.251±0.102 <sup>a</sup>		
	Methanol	0.213±0.010 <sup>h</sup>	0.145±0.015 <sup>k</sup>		
Two-way ANOVA ( <i>p</i> -values of the factors)					
Variable	df	F	<i>p</i>	F	<i>p</i>
PP	4	57.018	< 0.001	63.818	< 0.001
S	2	325.471	< 0.001	339.037	< 0.001
PP×S	8	34.025	< 0.001	45.194	< 0.001
Error	30				

GAE = gallic acid equivalents; CE = crude extract; RU = rutin

Data shown as mean ± SD values from analysis of triplicate analysis.

Mean ± SD values in a column with different lowercase superscripts denote significant ( $p < 0.05$ ) differences.

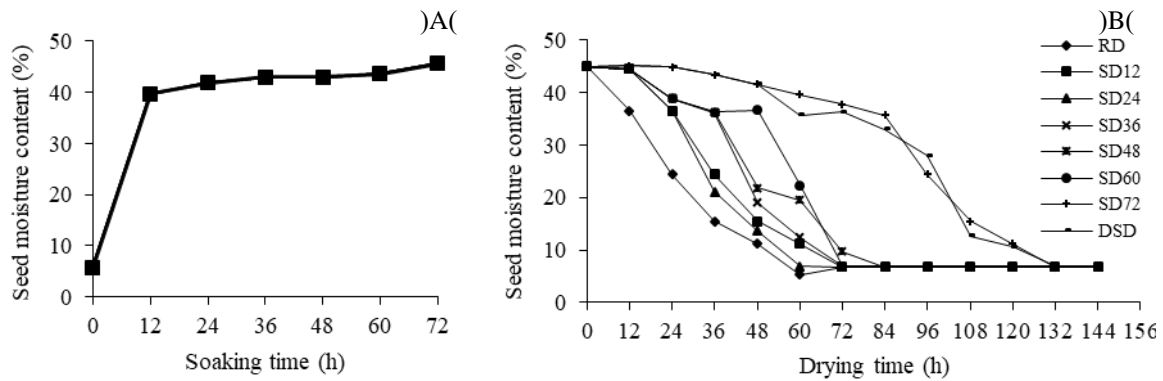
**Table 4** Pupal weight and pupal period of *Zeugodacus cucurbitae* treated with ethanol and n-hexane *Polyscias guilfoylei* leaf extracts

Concentration (%)	Ethanol extract			n-Hexane extract		
	N	Pupal weight (mg)	Pupal period (d)	N	Pupal weight (mg)	Pupal period (d)
0.00	44	12.60±1.44 <sup>a</sup>	7.100±0.141 <sup>a</sup>	60	12.60±1.39 <sup>a</sup>	7.225±0.330 <sup>a</sup>
1.25	32	9.15±4.86 <sup>b</sup>	7.350±0.252 <sup>b</sup>	45	9.20±1.17 <sup>b</sup>	8.050±0.173 <sup>b</sup>
2.50	48	8.65±0.96 <sup>b</sup>	8.050±0.443 <sup>c</sup>	48	8.40±1.58 <sup>b</sup>	8.400±0.455 <sup>c</sup>
5.00	47	7.58±1.02 <sup>b</sup>	8.150±0.191 <sup>c</sup>	49	7.58±1.31 <sup>b</sup>	8.450±0.238 <sup>c</sup>

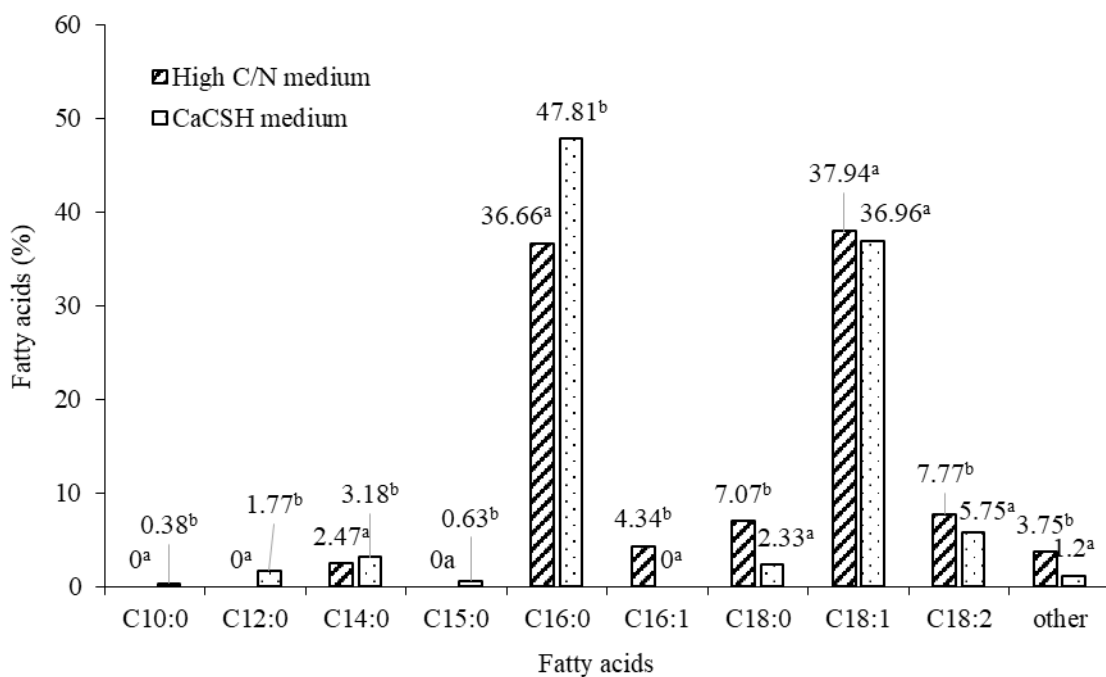
## Figures

- Place the figure after reference
- In text and in the figure caption, “**Fig. 3**” is used, NOT “Figure 3”
- Figures are numbered consecutively, in the order of their citation in the text
- Citations in text: see Fig. 1; see Figs. 1 and 2; see Figs. 1–3; see Figs. 1A and 1C; see Figs. 1B–1E; (Fig. 1); (Figs. 1 and 2); (Figs. 1–3); (Figs. 1A and 1C); (Figs. 1B–1E)
- Figure caption example: **Fig. 1** Infrared spectra of polyethylene/palm fiber composites at 0–30% by weight of fiber contents before ageing (note: **Fig 1** in bold font and no period at the end of the caption)
- Figure captions begin with a brief title sentence for the whole figure and continue with a short description of what is shown in each panel in sequence and the symbols used; methodological details should be minimized as much as possible.
- If footnotes are required, follow the same instructions as for tables
- If abbreviations are required, follow the same instructions as for tables
- Use the multiplication symbol for magnification after the number, e.g. 100×
- If a figure has more than one part, then the different parts are labelled using capital letters in round brackets: (A), (B), (C) and placed at the top right
- In text, if referring to a specific part of a figure, write as in these examples: Fig. 4B shows that... OR Figs. 4A and 4B show that.....

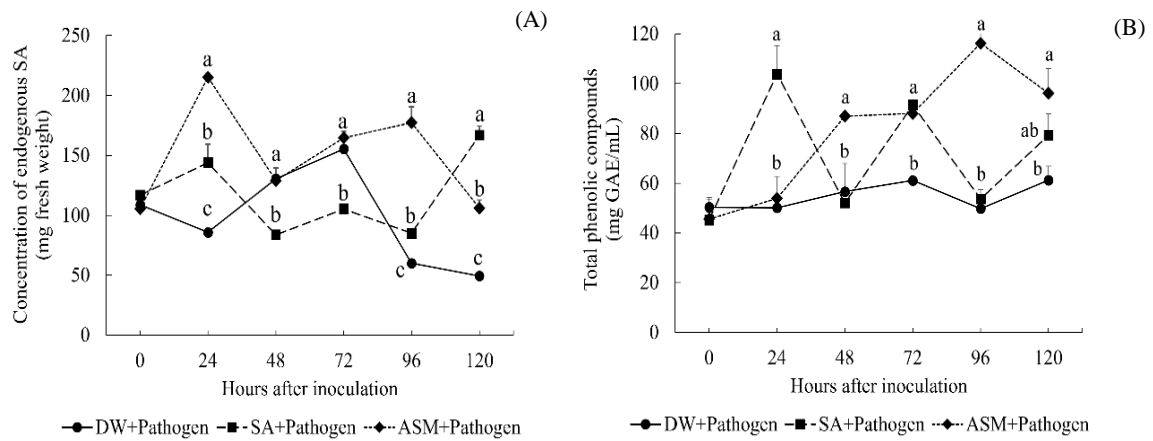
## Examples:



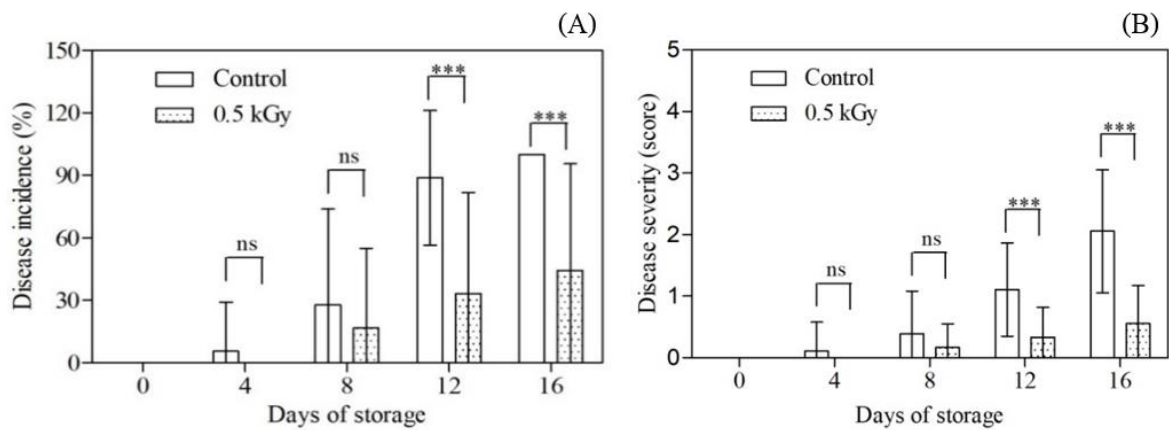
**Fig. 1** Changes in seed moisture content of Thai hot-chili seed cv. Maeping: (A) during soaking in 2% W/V KNO<sub>3</sub> solution at 20 °C for 72 h; (B) during post-priming drying using different drying rates (RD = rapid drying; SD12, SD24, SD36, SD48, SD60, SD72 = slow drying with drying times of 12 h, 24 h, 36 h, 48 h, 60 h, 72 h, respectively, followed by RD; DSD = double slow drying)



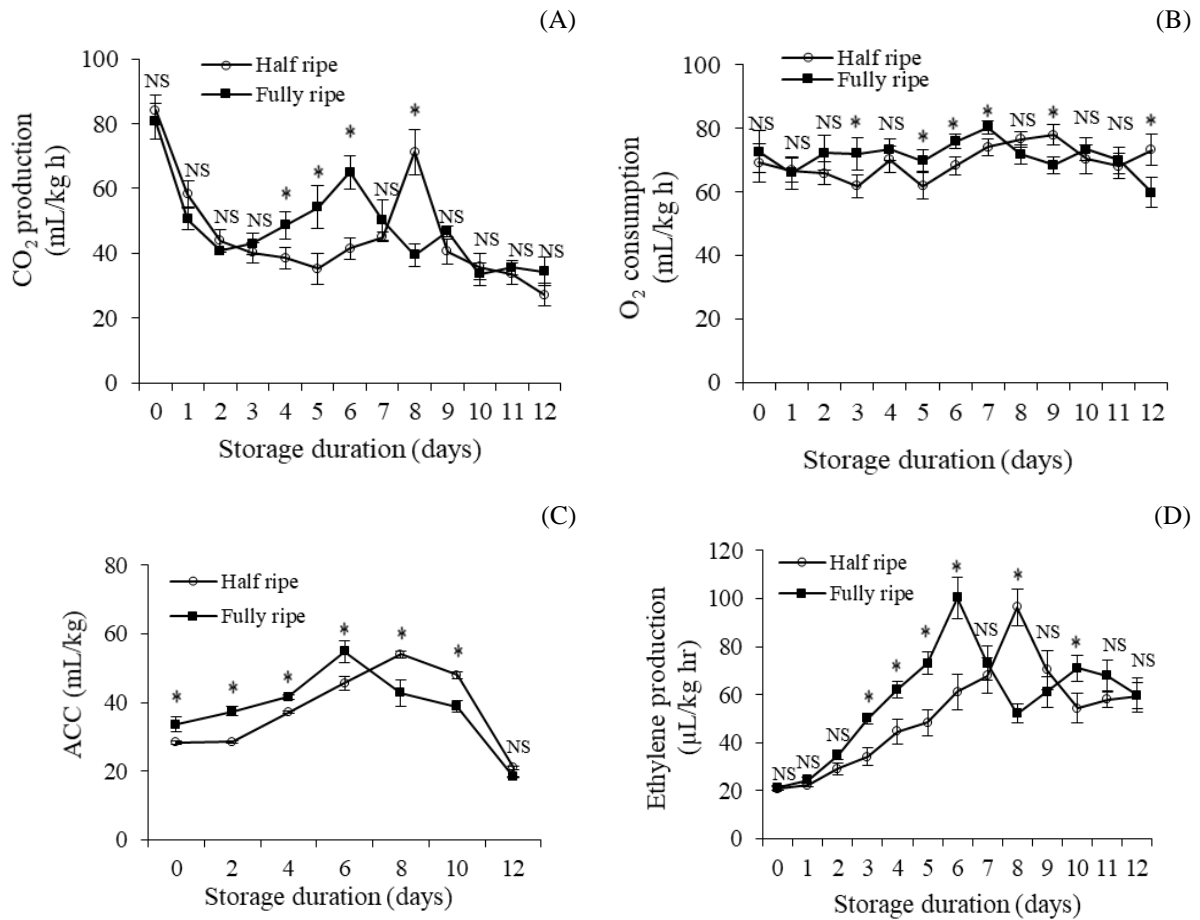
**Fig. 2** Major fatty acids in oil of *Pseudozyma tsukubaensis* YWT7-2 grown in synthetic high C/N medium and calcium cassava starch hydrolysate (CaCSH) medium at optimized composition where acids are myristic )C14:0(, palmitic )C16:0(, palmitoleic )16:1(, stearic )C18:0(, oleic )C18:1( and linoleic )C18:2(



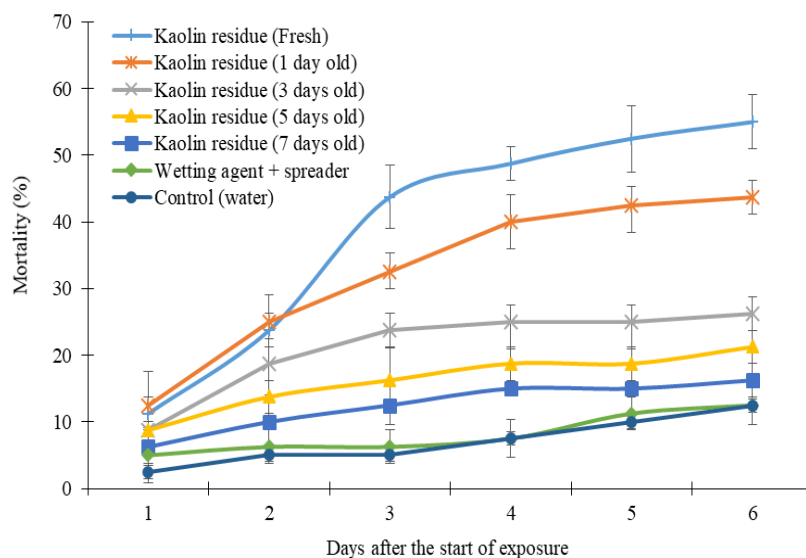
**Fig. 3** Concentration of endogenous SA (A); and total phenolic compounds (B) on leaf tissues of “Hom Thong” banana plants after treatment with exogenous 0.5 mM salicylic acid (SA) or 1 mM acibenzolar-S-methyl (ASM) for 24 h before inoculation with *Curvularia eragrostidis* SIH1 compared with inoculated plants after the treatment of distilled water at different periods, where experiment was repeated twice with three replicates per treatment, Error bars represent  $\pm$  SD. Different lowercase letters at each time point indicate significant ( $p < 0.05$ ) different between treatments



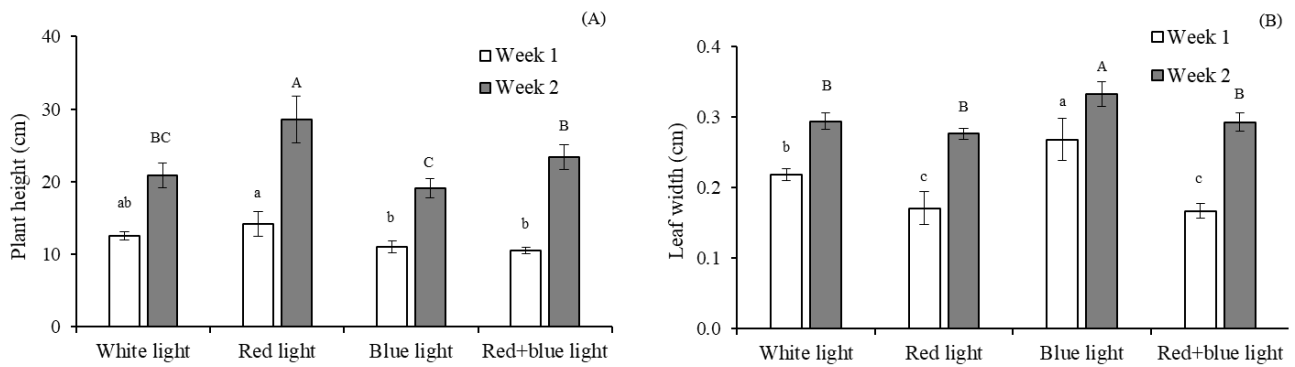
**Fig. 4** Mean of disease incidence (A); and severity (B) in mango fruit after treatment with E-beam irradiation at a dose of 0.5 or 0 kGy (control) and stored at 13 °C for 16 d; error bars represent  $\pm$ SD; \*\*\* = highly significant ( $p < 0.001$ ) difference; ns = non-significant difference ( $p > 0.05$ )



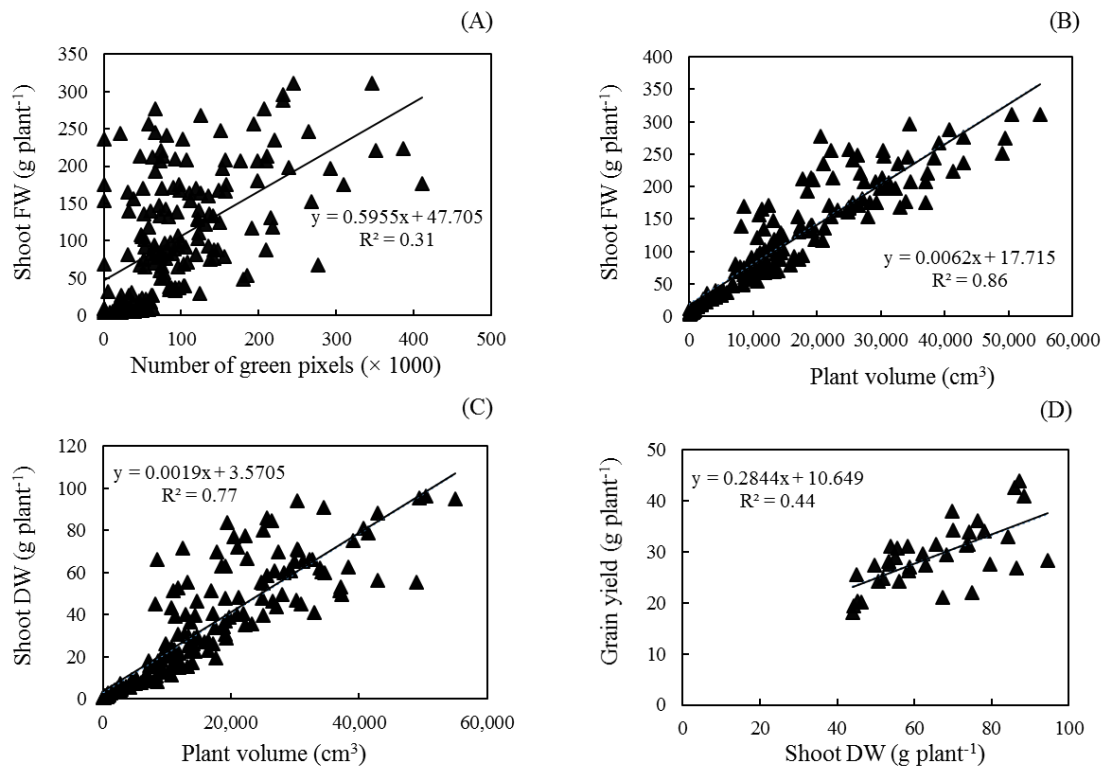
**Fig. 5** Changes in: (A) respiration rate; (B) O<sub>2</sub> consumption; (C) 1-aminocyclopropane-1-carboxylic (ACC); (D) ethylene production for abiu fruit during storage; where data are means ( $\pm$  SD) of five replicates; NS = non-significant ( $p > 0.05$ ) different and \* = significant ( $p < 0.05$ ) different between half- and fully ripe



**Fig. 6** Mean ( $\pm$ SD) mortality of *Aphis gossypii* adults after 1–6 d exposure to kaolin particle film

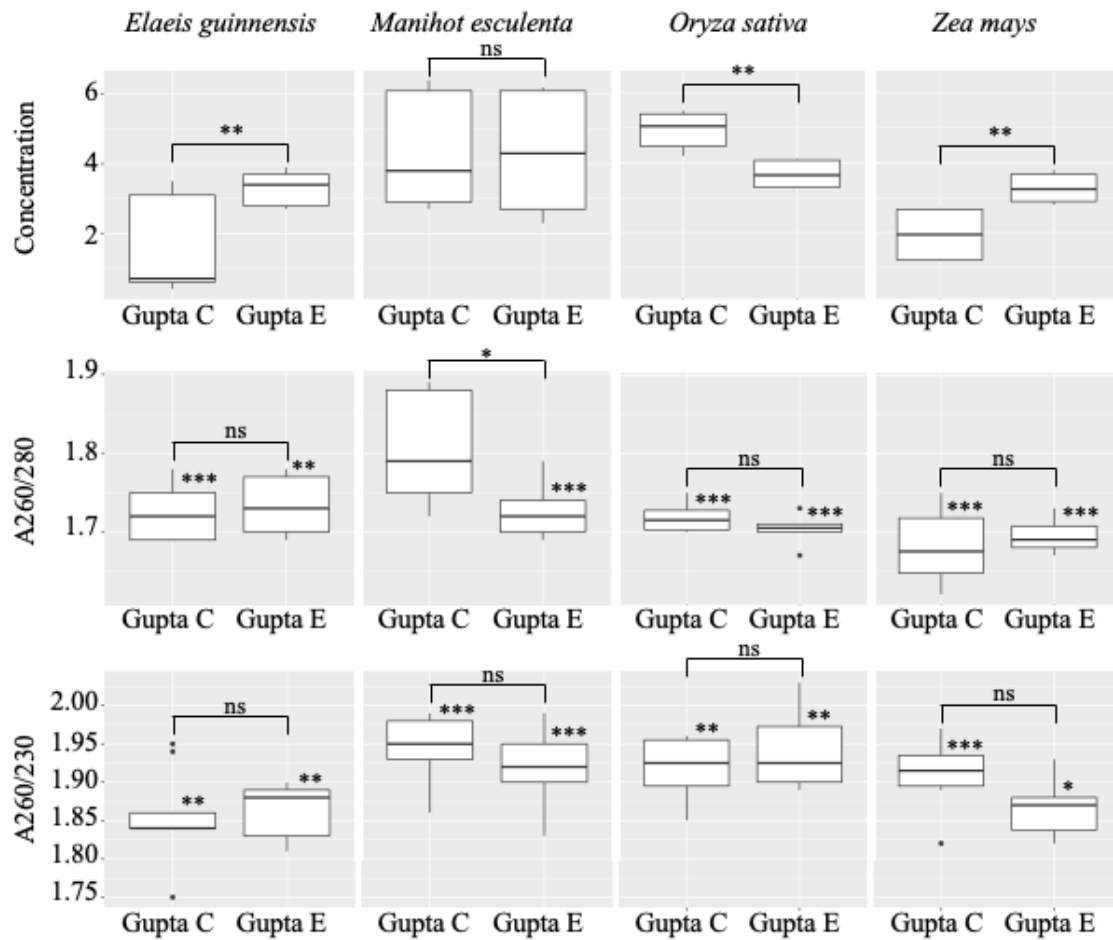


**Fig. 7** Rice seedlings grown under different light-emitting diode lights for 2 wk: (A) plant height; (B) leaf width, where error bars show mean  $\pm$  SD ( $n = 5$ ). Different lowercase or uppercase letters above bars indicate significant ( $p < 0.05$ ) differences among treatments within each growing period

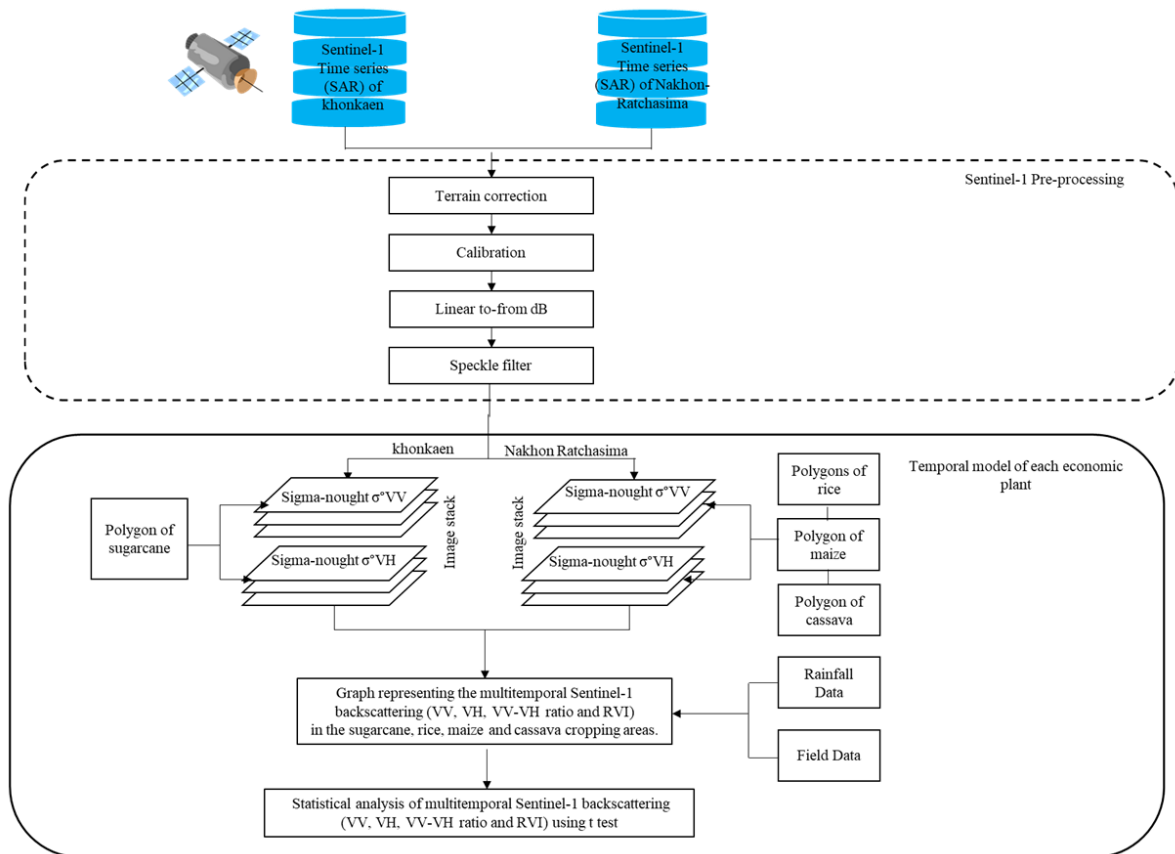


**Fig. 8** Relationships of six rice genotypes grown in automatic cultivated greenhouse between: (A) number of green pixels and shoot fresh weight (FW); (B) plant volume and shoot fresh weight; (C) plant volume and shoot dry weight (DW); (D) shoot DW and total grain yield per plant

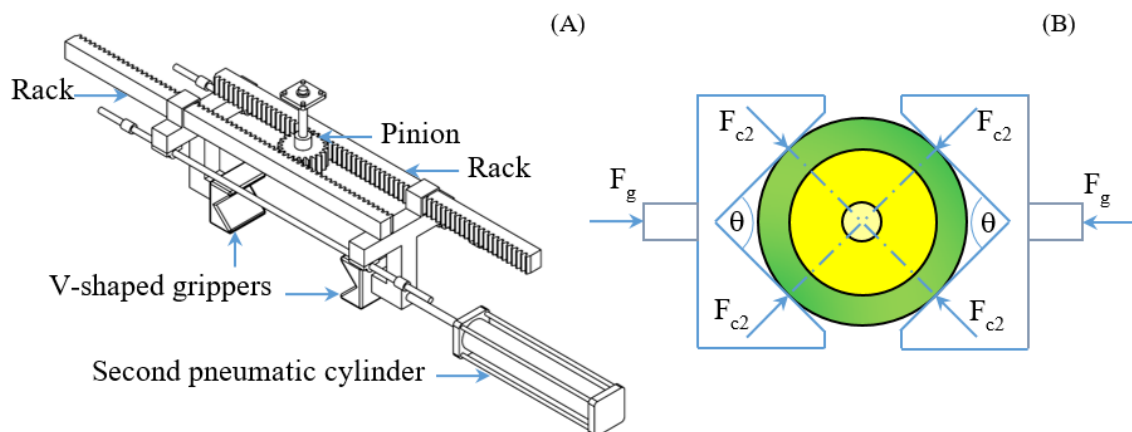




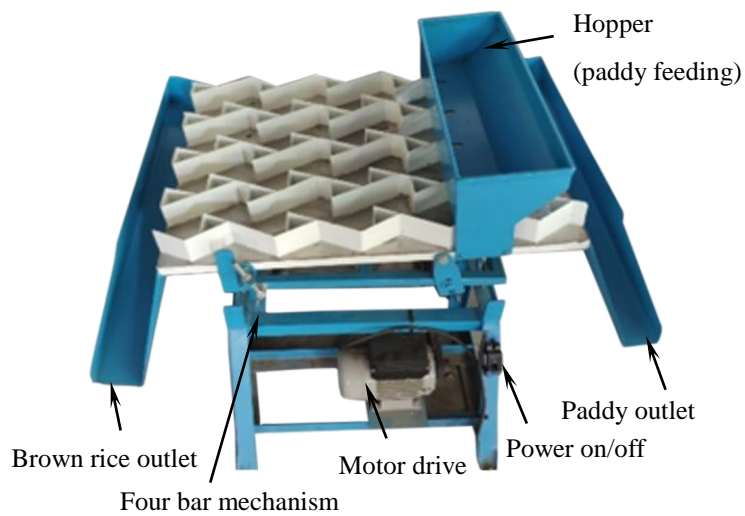
**Fig. 9** Comparison of DNA quality levels obtained from Gupta C to those obtained from Gupta E: (A) concentration; (B) A260/A280 ratio; (C) A260/A230 ratio, where results are shown as box and whisker plots, the two-sample t test (Welch two-sample t test) results are shown above the top square brackets for every measurement, the one-sample t test results showing differences between mean and standard value of 1.8 are shown only for the two absorbance ratios, ns = not significant ( $p > 0.05$ ) difference, \*, \*\* and \*\*\* denote significant differences for  $p < 0.05$ ,  $< 0.01$  and  $< 0.001$ , respectively, and black dots denote outliers in measurements



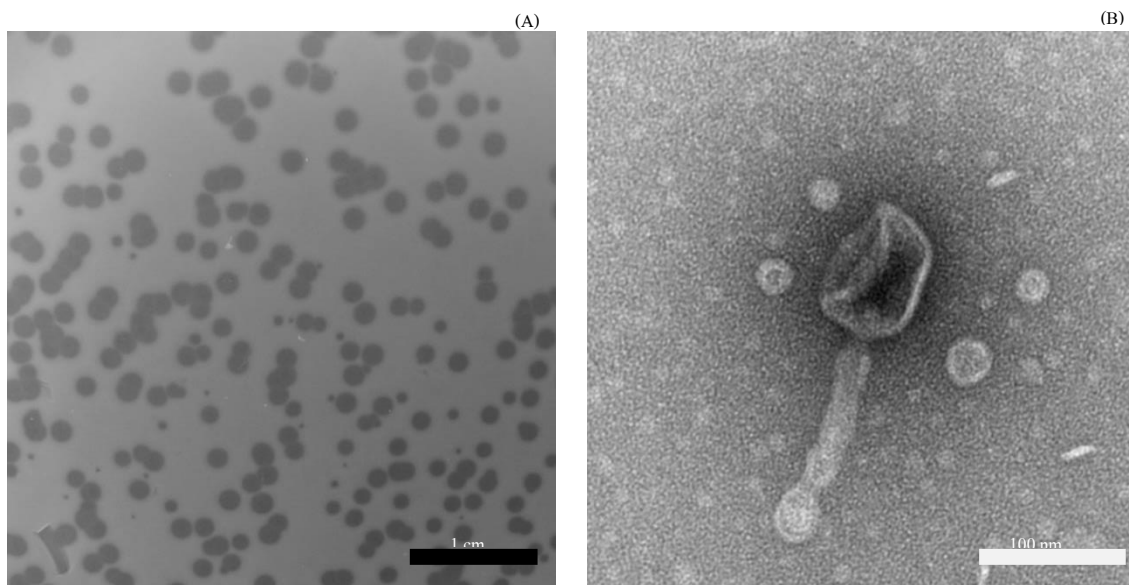
**Fig. 10** Research procedures and methods



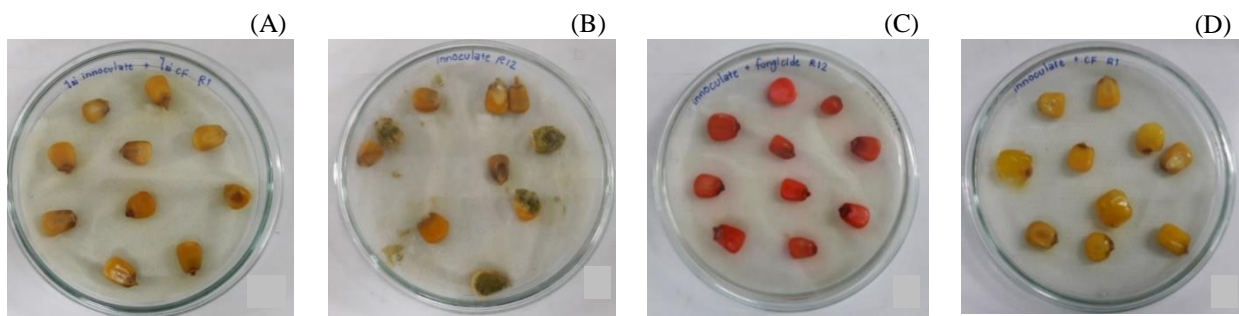
**Fig. 11** (A) Pineapple gripping unit; (B) schematic diagram of forces of V-shaped grippers acting on a pineapple, where  $F_{c2}$  = contact force generated by the gripper on a pineapple



**Fig. 12** Compartment-type paddy rice separator machine



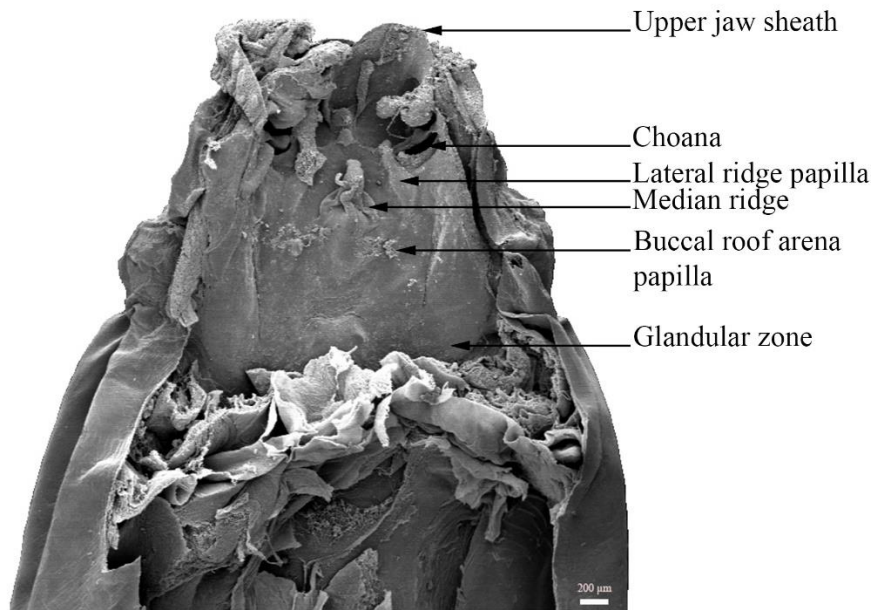
**Fig. 13** Plaque morphology and morphological analysis of *Pseudomonas* phage vB\_Pae-PA152: (A) double-layered agar plating of vB\_Pae-PA152 on tryptic soy agar medium, showing  $2.00 \pm 0.05$  mm turbid plaque; (B) virion morphology of vB\_Pae-PA152 analyzed using transmission electron microscopy, with Myovirus observed at 50,000 $\times$  magnification



**Fig. 14** Fungal growth on seeds: (A) without *Aspergillus flavus* inoculation and without coelomic fluid; (B) with *A. flavus* inoculation and without coelomic fluid; (C) with *A. flavus* inoculation and with fungicide; (D) with *A. flavus* inoculation and with coelomic fluid



**Fig. 15** Malformations of *Zeugodacus cucurbitae* stages after treatment with ethanol and n-hexane *Polyscias guilfoylei* leaf extracts: (A) normal adult; (B) pupae that failed to become adults, with color change to black; (C) abnormal adult with pupal skin still attached; (D) abnormal adult half emerged from pupa



**Fig. 16** Scanning electron micrograph showing roof of buccal cavity of *Brachytarsophrys feae* tadpole (THNHM 28693.2, stage 31)

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Pitcha-orn Sirichewakesron, Managing editor

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Kasetsart University Research and Development Institute (KURDI)

Kasetsart University, 50 Ngamwongwan Road, Chatuchak, Bangkok 10900, Thailand

E-mail: [anres@ku.th](mailto:anres@ku.th)