

REVISED GUIDELINES FOR PREPARING THESIS/DISSERTATION AND OTHER SCIENTIFIC PUBLICATIONS



Fourth edition

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PREFACE

Sokoine University of Agriculture regulations require that every dissertation/thesis submitted for consideration for a degree award must be satisfactory with respect to format and literary presentation. Failure to observe some of these regulations by some students at times has delayed them in completing the studies. Thus this booklet has been primarily prepared to assist students in preparing Dissertation and Theses. It is hoped that, they should also be useful to supervisors, examiners, researchers and editors of scientific documents published at Sokoine University of Agriculture, to ensure uniformity of writing style.

It should be noted that this document does not dwell in detail on how to write or prepare scientific writings. For this subject, students are advised to contact relevant books and research manuals. Preparation of good quality dissertation/thesis will greatly minimize frustrations to students, headache to the supervisors, examiners and readers alike.

This is the **fourth** edition of the first issue of the document, which was produced in 1993 and the second edition in 2002. This document has tried to add and clarify some issues/points, which were not clear or deficient in the first three documents. The revised document was approved by the Senate at its **143** meeting held on the 27th June **2006**.

During the revision of this document, many individuals played a role, including members of the Senate Postgraduate Studies Committee who scrutinized the document in detail before recommending it to Senate. May I take this opportunity to thank all whom in one way or another contributed to the revision, editing and finally printing of this **Fourth** edition.

Prof. Vedasto Muhikambele

Director of Research and Postgraduate Studies

June 2014

1.0 Formats of theses/dissertations at SUA

Theses and Dissertations at SUA can be developed in three formats: monograph, published papers or publishable manuscripts.

1.1 The Monograph format

This is the traditional format. The whole thesis/dissertation is written as a single text usually in five to six chapters: Introduction, Literature review, Methods (Materials and Methods), Results, Discussion (Results and Discussion) and Conclusion (Conclusion and recommendations).

1.1.1 Typescripts and layout

- (a) Sequence of sections/chapters should be in the following order; Title page, Abstract, Declaration (see details on respective section), Signature of the supervisor(s), Copyright (see details on respective section), Acknowledgement, Dedication (if any), Table of contents, List of tables, List of figures, List of appendices, List of Abbreviations and Symbols, Introduction, Literature review, Materials and Methods, Results and Discussion, Conclusions, Recommendations, References and Appendices.
- (b) The title of the dissertation/ thesis must not exceed 20 words.
- (c) Type text in 1.5 spacing on one side of A-4 size (80 g/m²) paper
- (d) Paginate the preliminaries (portions preceding the introduction) in lower case Roman numerals (i.e. i, ii, iii, etc.) beginning with the title page. Number pages of the body of the thesis in Arabic numbers (1, 2, 3, etc.) consecutively throughout. The page numbers should appear at the centre of the top margin.
- (e) Page margins should be as follows: the left hand margin must be 4.0 cm from the left edge of the paper, the right hand margin 2.5 cm from the right edge, the top margin 4.0 cm from the top of the page, and the bottom margin 2.5 from the bottom of the paper.
- (f) For dissertations/theses the title page must be arranged as follows:-

Title of the dissertation/thesis in capital letters (well-centred); indicate your full name; under your name the following declaration statement should follow and be centred:
"A THESIS/DISSERTATION* (*whichever is applicable) SUBMITTED IN FULFILMENT/PARTIAL FULFILMENT* OF THE REQUIREMENTS FOR THE DEGREE OF (insert name of degree) OF SOKOINE UNIVERSITY OF AGRICULTURE. MOROGORO, TANZANIA."
- (g) Indicate the month and year in which the degree is to be awarded at the bottom of the title page.
- (h) The abstract should follow the title page and begin on new page. It should be concise but comprehensive (not more than 300 words for

Master's Degree dissertation/thesis and not more than 350 words for PhD dissertation/thesis).

- (i) Every dissertation/thesis submitted for the degree must be accompanied by a declaration by the candidate to the satisfaction of Senate, i.e.,
I (Name of the candidate) declare to Senate that this dissertation/thesis is my own original work and that it has neither been submitted nor being concurrently submitted in any other institution.
- (j) The dissertation/thesis shall contain a statement of copyright by the author as follows:

No part of this dissertation/thesis may be reproduced, stored in any retrieval system, or transmitted in any form or by any means without prior written permission of the author or Sokoine University of Agriculture in that behalf.

Table of contents should be sufficiently informative with specific page numbers of all chapters and sections indicated. List of tables should be on a page by itself and arranged in the general format as the Table of contents. List of illustrations (Figures and plates) should also be placed on separate page by itself and arranged in the same general format as the Table of contents. The levels of section should not exceed four (eg (1.0, 1.1, 1.1.1, 1,1.1.1) and the levels should be indented accordingly.

- (k) Ensure that typescripts are legible, and that the fonts as well as the format are consistent throughout. The font should be Times New Roman size 12.
- (l) To itemise within paragraph, use the forms (a), (b), (c). Consecutive short sentences can also be itemised by starting them with a dash aligned to the left and ending them with a semi-colon.
- (m) Spelling should follow that of the U. K. English Dictionary.

1.1.2 FOOTNOTES

- (a) Include footnotes in the text only if their use is unavoidable.
- (b) Number them consecutively with a superscript number at the relevant author's name or point in the text.
- (c) .

1.1.3 TABLES

- (a) Type each table on a separate sheet in case it covers more than half a page.
- (b) Number them consecutively using Arabic numbers (e.g. 1, 2, 3, etc) in the same order they are referred to in the text.

- (c) Type adequate and self-explanatory captions above tables. For tables that are presented in a landscape format (horizontal), the caption **and page number** should be typed at the **centre, in this case, it will appear on the left margin and not on the top margin as for portrait format.**
- (d) Capitalise only the first letter of the first word of captions and of column headings in table except where otherwise necessary.
- (e) Use the fewest possible lines and avoid use of vertical lines to separate columns. .
- (f) Place acknowledgements of source cited below tables, using the format; Source: Gakale and Manthe (1987), etc.
- (g) Give references for tables in full only in the references list at the end of the dissertation/thesis and not as footnotes to the text.
- (h) The words - table, figure, appendix or map which refer to specific table, figure, map in the text should start with capital letter
- (i) Authors should take notice of limitations set by the size and layout of the document. Large tables should be avoided. A table should not exceed the printed area of the page. Fold-outs are not accepted in the main text. If any data are to be presented, an attempt should be made to divide these over two or more tables or reduce the size using smaller fonts and/or photocopying machines to the extent that is readable.

1.1.4 ILLUSTRATIONS

- (a) Provide these on separate pages in case they cover more than half a page.
- (b) Number figures sequentially in Arabic numbers (e.g. Figure 1, 2, 3, etc.) and refer to them in the text in order of their appearance.
- (c) Type captions below figures.
- (d) Capitalise only the first letter of captions, except where otherwise necessary.
- (e) When referring to figures in the text, use the form Fig. 3: (Fig.8), etc.
- (f) Photographs are only acceptable if they are relevant and should help the reader to understand the subject matter. Photographs should have good contrast and intensity. .

- (g) Figures should not have borders/grids

1.1.5 UNITS OF MEASURE

- (a) Use SI (System International) units (see Appendix 1).
- (b) Spell out units unless they are preceded by numbers.
- (c) Note that abbreviations for units are the same in singular and plural, e.g. write kg not kgs.
- (d) Express rates or amount per units in the form 50 kg/ha or 50 kg N/ha or 50 kg ha⁻¹. Do not write 50 kg/ha N. Leave space between the value and the unit of measure (eg, 50 kg/ha).

1.1.6 NUMBERS

- (a) In numbers with four digits on either side of the decimal point, run digits together, e.g. 1000; 8285; 0.3284
- (b) In numbers with more than four digits, leave a space (not a comma) between each group of three digits on either side of the decimal point e.g. 1 262 843; 256 421; 10 000; 0.032.
- (c) In columns of numbers (e.g. in tables) containing four or more than four digits, group the digits into three as follows:

28 032
1 422
862

- (d) For the decimal point, use a stop, not a comma, e.g. write 0.2 not 0,2.
- (e) For numbers below unit, precede the decimal point with a zero, e.g. 0.62 not .62.
- (f) Spell out numbers from zero to nine, but use figures for higher numbers, e.g. six plots; but 10, 15 plots.
- (g) In a series of three or more numbers, use figures irrespective of magnitude, e.g. "In trials with 6 cultivars in Zambia, 4 in Malawi and 8 in Mozambique
- (h) Use figures whenever a number is followed by a unit of measure and for days, years, dates, page numbers, classes, etc., e.g. 5 kg, 2 g, 3 days, 1 year, 6 January, page 13, type 7, etc.

- (i) Spell out numbers that occur at the beginning of sentences. Twenty students attempted.....
- (j) Express fractions as decimals, though percentages and simple fractions can still be used.
- (k) For simple fractions use the form one-quarter, two-thirds, not $\frac{1}{2}$, $\frac{2}{3}$ etc.
- (l) Where possible, avoid large figures ending in several zeros. Either spell them out or use an exponential for part of the number; e.g. for 1600000 write 1.6 million or 1.6×10^6 .

1.1.7 PERCENTAGE

Use the % symbol only with figure, e.g. 62%, but spell out the words percent or percentage when they occur without figures.

1.1.8 FORMULAE AND EQUATIONS

For formulae, use the internationally accepted format (see Appendix 2) – for a format from Elsevier Scientific Publishers).
Equations should be numbered using roman numbers in their order of their appearance

1.1.9 TIME

Use the 24-hour clock, e.g. 0730 h, 2345 h, etc.

1.1.10 DATE

Use the form 22 January, 2014; not 22nd January, 2014; January 22, 2014 or January 22nd, 2014.

1.1.11 YEAR

- (a) Write in the 1990s not in the 1990's
- (b) For two calendar years write 2001-02, not 2001 02, 2001-2 or 2001-2002
- (c) For single non-calendar years, i.e. parts of two years or seasons that extend over two years, write 2001/02 not 2001 2, 2001-02 or 2001-2002.
- (d) For two non-calendar years, write 2000/01 – 2001/02.

1.1.12 LOCAL TERMS

If local or unfamiliar terms are used, e.g. for plant or animal species, food products, etc. give the scientific names in italics or underlined or a description when the terms are first used.

1.1.13 ABBREVIATIONS

- (a) A selected list of symbols and prefixes which, in addition to those for SI units, can ordinarily be used is given in Appendix 3. However, spell them out in full if they are used in an unfamiliar context.
- (b) Where it is wished to use abbreviations of organisations, technical terms etc., spell them out in full the first time they occur, followed by the abbreviation in brackets, e.g. Sokoine University of Agriculture (SUA); sugar-cane mosaic virus (SCMV), etc. Thereafter use the abbreviation only.
- (c) In acronyms, degree designations, etc. it is usual to omit full stops, e.g. USA, not U.S.A., PhD not Ph.D.; FAO not F.A.O.

1.1.14 REFERENCES OR LITERATURE CITED

- (a) List all references cited in full at the end of the text, and not as footnotes to the text pages, tables of figures,
- (b) The references should be arranged alphabetically by authors and all authors, surnames and initials should be included (i.e. never use *et al.*), followed by the year of publication in parentheses; a full stop, the title of the paper; report; book; etc. (as used in the original document and should not be abbreviated; the journal volume number; the issue number (only if the pagination starts afresh in each issue concerned). If the reference is to a book, the town of publication, the publisher, the edition number (if not the first) should be added. Journal and book titles should be underlined or italicised.

1.1.15 CITATIONS IN THE TEXT

- (a) Cite references by author followed by year of publication. With separating comma, e.g. (Mugula, 2000).
- (b) For multiple authorship references cite up to two. For more than two cite the first mentioned, followed by *et al.* (meaning "and others"), but cite them in full in lists of references.
- (c) Citations in the text should take the following forms:
 - i) have been reported by Maerere *et al.* (2001).
 - ii) and Kanuya and Greve (2006) found that
 - iii) other results (Luoga and Witkowski, 2004; Mwamakimullah, 2010; Mbagu, 2014, Mulimila, 2005) have indicated that
 - iv) Msaky and Msanya (2000, 2001) found that (Papers published by the same author in two different years.
 - v) Kimaro (2013a, b).... (two papers published by the same author in the same year).

- (d) To refer to personal communications relating to unpublished material, personal communication etc, use the form ... (Robinson, J.A. personal communication, 2001). Do not place such citations in lists of references).
- (e) Secondary citations can take the form Madalla (2012), cited by Mbilinyi *et al.* (2014).
- (f) Secondary citation should be kept minimum possible or where possible avoided all together. Citations presented as "personal communications" shall not be allowed.
- (g) In order for a Thesis/dissertation to be recommended for examination at least 40% of all references cited must be journal articles and published not older than 5 years. Journal articles may include ones accessed through electronic databases.

1.1.16 CITATIONS IN LIST OF REFERENCES

- (a) Cite references in alphabetical order of author(s) and in order of year of publication.
- (b) For references with same author(s) and year of publication, start with papers by the same author being arranged in the order (1) single author, (2) two authors alphabetically according to the name of the second author, and (3) several authors chronologically with 1981a, 1981b, etc for papers published in the same year.
- (c) References by one author take precedence over references by the same plus additional authors irrespective of the year of publication.
- (d) Avoid using Anon. or Anonymous where possible. Where no name of an author is given, use the name of the sponsoring or issuing organization, ministry and department etc. if it can be identified.
- (e) Separate authors by semi-colons.

1.1.17 ORDER OF CITATION DETAILS

The following guidelines and examples are designed to show the main elements that should be cited and the order in which they should appear in references for the three main classes of publication most likely to need inclusion in list of references.

(a) Journals

- Author's name(s) and initials for forenames;

- Year of publication in brackets; followed by a period/fullstop
- Title of published paper;
- Name of journal or publication; spelt in full, omitting any definite article (i.e. The) at the beginning, and underlined; or in italics throughout.
- Volume and/or issue number;
- First and last page numbers (in full) for journal papers; total number of pages for publications referred to as a whole.

(b) Books

- Author's or editor's name(s) and initials, name of sponsoring or issuing organization or corporate body in the absence of a named personal author or editor;
- Year of publication in brackets, followed by a period/full stop;
- Title of book to be underlined or in italics;
- Name of publisher and town, in that order;
- Total number of pages in the form: 250pp.

(c) Individual chapters in multi-authored books

- Author's name(s) and initials;
- Year of publication in brackets; followed by a period/full-stop;
- Title of chapter or article, followed by the word In;
- Title of book underlined or in italics;
- The words "Edited by", followed by the name(s) and initials of the editor(s) of the publication, underlined and enclosed in brackets;
- Name of publisher and town, in that order;
- First and last page numbers of chapter, article, part, or section: pp. 18 – 24.

(d) Proceedings of conferences/workshop/monographs

- Author(s) name(s) and initials;
- Year in bracket; followed by a period or full-stop;
- Title of article; followed by: In:
- Title of proceeding or workshop underlined/italics;
- Name of Editor(s) in brackets;
- Date of the conference; town; country; Vol. (if any) page numbers (see examples for slight variations: section 18).
- First and last pages of the article: pp. 180 – 194.

(e) Dissertation and Theses

- Author(s) name(s) and initials;
- Year in bracket; followed by a period or full-stop;
- Title of the dissertation;

- Name of the host institution
- First and last pages of the section referred to.

(f) Citing from electronic sources

- Author's name,
- Publication date (in brackets),
- Internet address [in square brackets].
- Date of visit to the website.

(g) Citation of newsletter

Should be cited as articles in periodicals

1.1.18 EXAMPLES OF CITATION LAYOUTS

The following examples show how to set out the details needed for the main types of literature listed above. Note the punctuation; words to be printed in italic script or to be underlined.

(a) Journal paper in English

Tarimo, A. J. P. (1997) Physiological response of groundnut to plant population density. *African Crop Science Journal* 5: 267 – 272.

Temu, A. E. and Due, J. M. (2000). The business environment in Tanzania after Socialism: Challenges of performing banks, parastatals, taxation and the civil service. *Journal of Modern African Studies* 38(4): 683 – 712.

(b) Journal paper not in English

Nunes, E. (1985). Investigacao recente sobra as principais factor queimitam a producao do milho em mozambique. (A recent investigation of the main factors limiting sorghum production in Mozambique). *Agricultura Boletim Tecnica* 8: 4 – 10.

(c) Journal paper accepted for publication but still in press

Sones, K.R. (Year). Yield targeting in rabi sorghum. *Journal of Agronomy*. (In press)

(d) Books

Stocker, L. (2000). *Practical Wildlife Care for Veterinary Nurses, Animal Care Students and Rehabilitators*. Blackwell Science Ltd., Oxford. 288pp. (288pp- refers to total number of pages of the book)

(e) Edited Books

Hulme, D. and Murphree, M. (Eds.)(2001). African Wildlife and Livelihoods: The promise and performance of Community Conservation. James Currey Ltd, Oxford. 336pp.

(f) A chapter in multi-authored book

Barrow, E., Gichohi, H. and Infield, M. (2004). The evolution of community conservation policy and practice in East Africa. In: African Wildlife and Livelihoods: The Promise and Performance of Community Conservation. (Edited by Hulme, D. and Murphree, M.) James Currey Ltd, Oxford. 59 – 73 pp.

(g) Conference or Workshop proceedings referred to as a whole

Boyle, P.J. (Ed.)(1987). *Appropriate Manpower for Agricultural Research*. Proceedings of SADCC Workshop, Gaborone, Botswana, 25 November, 1985. 120pp.

(h) A paper in a conference or workshop

Ishengoma, R. C. and Ngaga, A.G. (2005). Trends and accomplishments of research in forestry and nature conservation at SUA 1996 - 2000. In: *Proceedings of The First University-wide Scientific Conference*. (Edited by Matovelo, J. A. *et al.*). 5 – 7 April 2000, Morogoro Tanzania, 28 – 59pp.

(i) Monographs

United States Agency for International Development (2000). *Rice Production in Africa*. Agriserve Ltd., New York, 150pp.

(j) Annual Report

Botswana Ministry of Agriculture (1999). *Livestock Research in Botswana Annual Report*. Government Printer, Gaborone, Botswana. 10pp.

(k) Dissertations

Maskini, M. S. (2000). Spatial and temporal grazing patterns of livestock and wild herbivores at Ngorongoro Conservation Area. Unpublished Dissertation for Award of MSc Degree at Sokoine University of Agriculture, Morogoro. Tanzania. 112 – 137 pp.

(l) Citing from electronic sources

Kimbrell, A., (May 2002). Fatal Harvest: The tragedy of industrial Agriculture. [<http://www.fatalharvest.org/press.html>] site visited on 9/8/2002.

(m) Citing news paper articles and other reports

Kisembo, P. (2006). Survey shows food prices further going down in Dar-Es-Salaam. Daily News, Issue No. 36000. P.13. Preferably articles cited from newspapers should be more of feature articles than otherwise.

1.1.19 BINDING AND SUBMISSION

1. It is advisable to have Department/Faculty/Institute Postgraduate Studies Committee check the unbound dissertation/thesis before sending it for hard-binding.
2. After certification by the supervisor that the candidate has satisfactorily incorporated all the recommended corrections, the candidate shall submit five hard bound copies of the dissertation/thesis to the Secretariat, Senate Postgraduate Studies Committee. Each copy shall be bound black.
3. Candidates will also be required to submit in a separate cover, one hard copy and one electronic copy of an extract giving short account of the the dissertation/thesis. . The extract shall include a running title, an introduction, a summary of innovative findings, their perceived usefulness in outreach/industrial/commercial applications and an indication of areas where the results may find immediate application opportunities. The extract shall not exceed 1000 words. **Any submission without the extract shall be deemed to be incomplete and therefore not ready for error free certificate.**
4. The spine shall be embossed in gold, bearing:-
 - a. the surname and initials of the candidate
 - b. the acronym for the degree for which the dissertation/thesis is being submitted
 - c. the year of degree award
5. The writing on the spine shall read from the bottom to the top.
6. The title of the work shall be printed in gold letters on the front cover of the bound volume.
7. Before hard binding their dissertations/theses, candidates are advised to refer to already bound and approved copies in the library.

1.2 Dissertation/Thesis developed in a published papers format

1.2.1. Number of published/Accepted/ submitted papers

1.2.1.1 PhD candidates

The candidate must have at least three full-length papers emanating solely from his/her PhD studies.

Two of the said papers must be either "published", "in press" or "accepted" in peer reviewed scientific journal(s). The third paper may have the status "submitted".

1.2.1.2 MSc candidates

The candidate must have at least two full-length papers emanating solely from his/her MSc studies.

One of the said papers must be either "published", "in press" or "accepted" in peer reviewed scientific journal(s). The second paper may have the status "submitted".

1.2.2 Format and authorship for published/submitted papers

- a) The format and writing style of the individual manuscript shall be determined by the targeted journal
- b) Multiple authorship -In the published paper the candidate must appear as first or second author
- c) In case part of the work was performed in collaboration with another investigator and/or student(s). The candidate should submit a separate letter explaining the kind of collaboration involved that is; which parts of the dissertation/thesis describe results from collaboration, and what was the role of the candidate in the collaboration.
- d) For such a work, a letter from the student's main supervisor should accompany the submitted dissertation/thesis. The letter should indicate the particular contribution of the student to each paper (in the case of multi-author papers). It should also indicate that the submitted articles were not and will not be part of other dissertations/theses in the "Published Papers" format.

1.2.3 Typescript and layout

The dissertation/thesis shall have common sections consisted of: extended abstract, introduction, conclusions, references, list of published papers followed candidate's declaration to Senate. These sections should follow the SUA monograph format.

1.2.3.1 Extended abstract

Extended abstracts should be written to include the following headings: introduction, methods, findings, conclusion and recommendations. Extended abstracts should not exceed 4 pages including the references.

Introduction:

One to two paragraphs at the most. The introduction section should present the scope and objective of the study and state the problem in a condensed manner.

Methods

The methodology must be clearly stated and described in sufficient detail or with sufficient references.

Findings

The findings and discussion of the work should be explicitly described and illustrated. Supporting figures, tables and images of the results (no more than two figures and two tables) may be included in the extended abstract.

Conclusions

Conclusions should include the principles and generalisations inferred from the results and key recommendations.

References

References that appear in the extended abstract should be listed using SUA format.

1.2.4 Copyright (Refer section 1.1.1 (j))

1.2.5 List of publications

The candidate should list all papers that are included in the dissertation/thesis. The list should include the authors, year, title, journal/expected journal, volume, page (if published)

1.2.6 Declaration

Refer to section (1.1.1 (i)) in the monograph format

1.3 Dissertation/Thesis developed in a publishable manuscripts format

Dissertation/Thesis in publishable manuscript (manuscript-within-thesis) format shall consist of chapters in form of publishable papers. Writing of dissertation/thesis under this category shall follow SUA guidelines.

1.3.1 Typescript and layout

The dissertation/thesis shall have common sections consisting of extended abstract (refer section 1.2.3.1), copyright (refer section 1.1.1 (j)), and list of paper chapters followed by candidate's declaration to Senate (refer section 1.1.1(i)).

1.3.2 Chapters of the manuscript

Each chapter/paper forming the manuscript shall consist of a title, abstract, introduction, material and methods, results, or results and discussion, conclusions and references of the chapter.

2.0 Attachments

The candidate may wish to add supplements or appendices of published or unpublished data to the dissertation/thesis

3.0 Binding of the final dissertation/thesis

Binding of the final dissertation/thesis shall adhere to SUA guidelines as stipulated in section 1.1.19 above.

APPENDIX 1: SELECTED SYMBOLS FOR UNITS AND PREFIXES

A	ampere	K	Kelvin
Å	Angstrom	lm	lumen
atm	atmosphere	lx	lux
Bar	Bar	m	metre
c	centi ($\times 10^2$)	m-	milli- ($\times 10^{-3}$)
°C	degree Celsius	mbar	millibar
cal	calorie	M	mega- ($\times 10^3$)
d	day	μ	micro- $\times 10^{-6}$
d-	Deci- ($\times 10^{-1}$)	min	minute (angle)
F	Farad	ml	milliliter
°F	degree Fahrenheit	n-	nano- ($\times 10^{-9}$)
ft	foot (feet)	N	Newton
g	gram	O	Ohm
h	hour	Pa	Pascal
ha	hectare	S	second (time)
hp	horsepower	t	tonne
Hz	hertz	V	volt
J	joule	W	Watt
k	Kilo ($\times 10^3$)		

APPENDIX 2: FORMULAE

1. Formulae should be typewritten, if possible leave ample space around the formulae.
2. Subscripts and superscripts should be clear.
3. Greek letters and other non-Latin symbols should be explained in the footnote where they are first used. Take special care to show clearly the difference between zero (0) and the letter O, and between one (1) and the letter l.
4. Give an interpretation of all symbols immediately after the equation in which they are first used.
5. For simple fractions use the solidus (/) instead of a horizontal line, e.g. $\frac{1p}{2m}$ rather than $\frac{1p}{2m}$
6. Equations should be numbered serially at the right-hand side in parentheses. In general only equations explicitly referred to in the text need be numbered.
7. The use of fractional powers instead of root signs is recommended. Also powers of log e are often more conveniently denoted by exponent.
8. Levels of statistical significance which can be mentioned without further explanation are: *P<0.05, ****P<0.01**, ***P<0.001.
9. Level of significance for comparable means should be written in superscript in a table and be defined as footnote below the table
10. In chemical formulae, valence of ions should be given as, e.g. Ca²⁺ and CO₃²⁻. Not as Ca⁺⁺ or CO₃⁻⁻.
11. Isotope numbers should precede the symbols, e.g., ¹³O.
12. The repeated writing of chemical formulae in the text is to be avoided where reasonably possible; instead, the name of the compound should be given in full. Exceptions may be made in the case of a very long name occurring very frequently or in the case of a compound being described as the end product of a gravimetric determination (e.g. phosphate as P₂O₅).

APPENDIX 3: ABBREVIATIONS

a.e.	acid equivalent	NFE	nitrogen-free extract
a.i.	active ingredient	n.s	no significant difference
AI	artificial insemination	NW	northwest
approx.	Approximately	OM	organic matter
CEC	cation exchange capacity	pH	Hydrogen ion concentration
CF	crude fibre	post-em	post-emergence
cm	centimeter	p.p.m.	parts per million
CP	crude protein	pre-em.	pre-emergence
CV	coefficient of variation	r	correlation coefficient
cv	cultivar	RH	relative humidity
DE	digestible energy	r.p.m.	revolutions per minute
DM	dry matter	s.d.	standard deviation
e.g.	for example	s.e	standard error
F1	first filial generation	SNF	solids not fat
i.e.	for example	sp.	species (singular)
IU	international unit	spp.	species (plural)
LAI	leaf area index	TDN	total digestible nutrients
M	molar	UV	ultraviolet
Max.	maximum	var. vars	variety(ies)
Min.	minimum	wt.	weight
NAR	net assimilation rate	vol.	volume

APPENDIX 4: FORMAT FOR MSc/PhD RESEARCH PROJECT PROPOSALS

All postgraduate students are required to use this format in preparing their research project proposals.

Title of Thesis/Dissertation	-	front page
Name of Student and Department	-	front page
Name(s) of Supervisor(s)	-	front page

1. Introduction, justification and objectives
2. Literature review -.Review only the most pertinent literature; selective and critically paying attention to the state of knowledge on the subject, what remains to be done, methodologies/techniques and expected contribution of your study.
3. Material and Methods. Be very concise with special attention to experimental designs and statistical procedures.
4. Location and duration
5. Source(s) of funds and budget
6. Schedule of activities
7. References
8. Signature of student and date
9. Signature(s) of supervisor(s) and date.

Note that the maximum number of pages should not exceed 10 for an MSc proposal, and 15 for a PhD proposal, all double-spaced and the font size fixed at 12 points. The number of pages above does not include appendices.