

## Detail Instructions and Guidelines

### A. Instruction to Authors (<http://narc.gov.np/narc-journal/>)

Journal of Nepal Agricultural Research Council (a peer reviewed and open access journal published by Nepal Agricultural Research Council, NARC) abbreviated as J. Nep. Agric. Res. Council. publishes original (not published or submitted for publication elsewhere) research and review or feature or vision articles written in English (use US or British English which has shorter words or phrases eg color not colour) from the world in all aspects of agricultural sciences particularly in the field of agriculture (crop science, animal science, agro-forestry, post harvest technology) and several other topics related to agricultural sciences. This journal is basically for experimental based papers. Besides main research articles or critical review papers, research notes including characterization notes of stable genotypes/landraces having accession number from the National Genebank and opinion papers may also be published in the journal.

Generally, evaluation field trials (though depend on the nature of trials) should be **repeated across more than one season, in multiple seasons or in more than one location** as appropriate. Research findings from a single season or location of evaluation trials may be accepted as Research Note, if the findings are of exceptional interest. Announcement about meeting, conference, seminar, workshop, book review, correspondence and other items of interest of the NARC may be sent for publication. All materials should be sent to the Managing Editor (Chief, CPDD-NARC, Khumaltar) at an email: [cpdd@narc.gov.np](mailto:cpdd@narc.gov.np) or [narcjournal@gmail.com](mailto:narcjournal@gmail.com) or both.

Authors interested to publish their article in the journal are requested to submit online through <https://www.nepjol.info/index.php/JNARC/about/submissions#onlineSubmissions> or <http://narc.gov.np/submission/>. Paper can be submitted anytime. All authors must submit a cover letter mentioning why the contents in submitted paper is of interest to scientific community, researchers and general readers, and novelty (key new findings). The letter should also mention that the paper has not been submitted to any other journals for review and publication. All papers are screened first for format and style as per this guideline. The paper might be returned immediately, if guidelines are not met, and resubmission of such revised manuscript is encouraged. Paper after accepting at first stage screening will assign a number and go for review process.

Each manuscript submitted to the editorial committee is registered and reviewed by at least two peer reviewers. All authors and reviewers are requested not to change the file name; however, words can be added at the last of the file name. Manuscripts that need improvement as suggested by reviewers and editorial committee will be returned to corresponding author for correction and incorporation of the comments. The corrected version of the manuscript should be submitted **within 7 days** to the Managing Editor. Plagiarism is checked on corrected version and if it cross the certain percentage, paper will be returned to author for revision. After print setting, author will have a chance for proof read.

Authors are encouraged to have colleagues review a manuscript before submitting it for publication. Additional authorities are consulted as necessary to confirm the scientific merit of any part or all of the manuscript. A reviewer is asked to review the manuscript and to transmit **within two weeks**. Each reviewer makes a specific recommendation for the manuscript based on the following aspects that are applicable:

- Importance of the research
- Originality of the work
- Appropriateness of the approach and experimental design
- Adequacy of experimental techniques
- Soundness of conclusions and interpretations
- Relevance of discussion
- Clarity of presentation and organization of the article
- English composition

Publication in the journal is **free of charge**. Print copy is distributed freely from CPDD, Khumaltar. On request, electronic file of final article will be provided on PDF format and all papers published in any volume of this journal are downloadable from <http://narc.gov.np/narc-journal/> or <https://www.nepjol.info/index.php/JNARC>. Visit <http://narc.gov.np/narc-journal/> for details and earlier volume.


### Journal Features

- 
- DOI to each paper
  - Abstracted and indexed in more than 18 databases (<http://narc.gov.np/abstracting-and-indexing/>)
  - Scientific editors name in each paper
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  - Can follow on Facebook, Twitter, Linked in Google Plus
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### Format for Main Research Articles

The manuscript should be typed in A4 size (8.5- × 11.0-in) page in single space (Times New Roman) in MS-Word. Use normal text and do not format text, **Table** other than as mentioned in this guideline. Capitalize initial of each keywords in title with 14 font size and capitalize first level HEADINGS, capitalize initial of each keywords in Sub-headings. Capitalize initial letter of **Table** and **Figure**. Bold all HEADINGS and **Sub headings**. Do not use period (.) in very common abbreviations for example eg, etc, et al, ie, Rs, Mr, Dr, spp, sp. All years should be in English calendar and write single year, not two years as 2015/16. Generally harvesting time as well as year of longer growing period determines the year. Use 'and' instead of &. Do not provide space before percentage sign of any value (67%) and use word per or symbol (/ mostly in **Table** and **Figure**) not superscript. Italicize non-English words and scientific name and it should be followed by authority and genetics (eg *Oryza sativa* L., 2n=2x=24). Capitalize first letter after colon. Use Times New Roman with 10 font size for general text (body); 9 for abstract, keywords, **Table**, **Figure**, acknowledgments and references. Do not keep any things in text box. Foot note or **Table** foot note, header, footer and source should be italicized with 8.5 font size. Use one point font size larger than text for headings, sub headings, **Table** caption and **Figure** caption. Make appropriate color for **Table**, **Figure**, **Title**, **HEADINGS** and **sub headings** (see latest issue for color use). Color is used for title, headings, sub-headings, Table lines, Figures, column headings, headers, all link address (email, URL, etc) without underline, words Table and Figure. Do not justify title, HEADINGS, sub headings, **Table** caption, **Figure** caption, authors name and address, keywords, text column, etc.

**Title and Author:** The title should be informative and unique started with keyword but concise and clear and should reflect the content of the paper. It should be in title case. Abbreviated and shortcut word should not be used in the title. Provide running title (short as much as possible). If common name of any species or genotypes are available, mention only common name and not scientific name in the title. Below the title, name and the address of all authors should be given. Write the addresses of the authors at the time of the work reported in the paper. Indicate current or postal addresses as a footnote on the first page of the paper, if the address is different from workplace. The initials of the middle names and full form of first and family names, full address of each author should be written and indicate the corresponding author using symbol @. Provide email address of all authors, in case of multiple authors with same address other than corresponding author, give email of each author indicating by initials eg (BKJ <joshibalak@yahoo.com>; TBG <tek\_fisheries@hotmail.com>). Corresponding author must mention ORCID (visit this site for getting this ID, <https://orcid.org/>) as  <http://orcid.org/0000-0002-7848-5824> just after email address.

### ABSTRACT

Every manuscript (article) must have a short abstract (not more than 250 words), which should be complete itself but it should be concise and clear without any cited references. Abstract should highlight rationale, objectives, materials and methods, important results and conclusion written in a manner so that it is suitable for direct reproduction in abstracting journals. Keywords (not more than 5 words) should be written below the abstract in alphabetical order. Authors and subjects index are published at volume number that are divisible by 4. In addition to these, **abstract should also be written in Nepalese language using Preeti font in 11 font size**. If you prefer Unicode, then first type in Unicode and then convert them to Preeti font online at <http://unicode.shresthasushil.com.np/>.

### INTRODUCTION

Should give appropriate background and explain the things that are proposed. It should include short introduction to justify the research and relevant reviews and state the objectives clearly.

### MATERIALS AND METHODS

Should include description of experimental materials, procedures and statistical design used as well as method to analyze the results. New methods should be described in detail and for methods developed by earlier researcher, only reference may be cited. However we prefer detail methodology. Report the location, geo-references (altitude, latitude and longitude, etc) and date of experiment conducted. Write scientific name with authority, common and local name of organism. If possible mention chromosome number of organism as 2n=2x=24 for *Oryza sativa* L.

## RESULTS

Results and discussion should be under different headings. Results should be presented in a concise manner avoiding data that are already given in **Tables** and **Figures**.

## DISCUSSION

Discussion part should not repeat the results but should explain and interpret the data based on the published relevant studies. Insert graph and **Table** wherever necessary and number them sequentially within each paper (article). The conclusion, recommendation and possible impact (if any) should be based on the supporting data. But there should not be a separate heading for conclusion and recommendation.

**Units of Measurement:** All units and measures should be in the metric system or in the International System Units (SI) and should be abbreviated for technical values. Local units and measures can be used in parenthesis. Currency exchange rates should be in US\$ along with the local currency for the appropriate date for any prices cited.

**Reporting Time and Dates:** Use 12-hr time system with four digits, the first two for hours and the last two for minutes (eg 02:30 pm). Dates are reported with day of the month first, then month, followed by the year without comma (,) eg 7 Aug 2000.

## ACKNOWLEDGMENTS

Acknowledge the person and/or institution and funding agencies, if necessary, who actually help to achieve the objectives of the research. If research is project base, it is suggested to include project brief including project number.

## REFERENCES

Only the papers closely related to the authors' work should be referred in the text by author's family name and the year of publication and be cited in an alphabetical order. When quoting (citing) references in the text, the last names of the authors for up to two authors (eg Joshi 2015, Gurung and Shrestha 2011) and last name of the first author followed by et al for more than two authors (eg Singh et al 2014) should be given followed by the year of publication within parenthesis. Do not use comma (,) before year or to separate family name and year, do not use period (.) in et al, eg, etc, ed, eds and initials of author name, do not give space between two initials of author name and in between volume and page numbers, do not justify references list, give 0.3" hanging indent to each reference list, capitalize each keyword in title of book, proceedings, workshop, etc. When references made to more than one publication by the authors in the same year, the publication should be numbered as (a) and (b) of that year with the earliest publication the year being designated (a) and so on. Each reference should contain first author's family name followed by his/her first initial name and the middle name (initial only) and the co-author/s with initials of the first and the middle names followed by family name/s, year of publication (English calendar), title of the research article/s, name of the journal or name and place of publisher (in case of book), volume number and page number/s. If no authority is available for citation, credit the work to the publisher. Please refer following examples for reference citing. Provide the link for references that are available online. If DOI is available, provide at the end of reference in the format as **DOI:** <http://dx.doi.org/10.1073/pnas.87.12.4576>. **DOI**, volume number (5:34-56), **pp** (pp.67-70) and **In** (in case of book chapter, proceedings etc (**In:** Agrobiodiversity ...)). Keep the link address and email in color text and remove underline (<http://narc.gov.np/narc-journal/>).

For electronic sources follow as the same kind of material in print, starting with the author, year, title and then giving further information as for a chapter or journal article and add the on line address URL and the date of information accessed. If web address is too long, shorten it through <https://goo.gl> and cite this short link in the text. For reference without date, write DNA (date not available) in the place of year, eg Maharjan B. DNA.

### Journal

Joshi BK, S Gyawali and DS Poudyal. 2002. Regression analyses and multiple comparison procedures: Uses and misuses. J. Institute Sci. Tech. **12**:69-81.

### Book

Cochran WG and GM Cox. 1968. Experimental Designs. 2<sup>nd</sup>ed, John Wiley and Sons, Inc., New York.  
Lewis WH, ed. 1980. Polyploidy: Biological Relevance. Plenum Press, New York.

### Book Chapter and Proceedings

Yuan LP, ZY Yang and JB Yang. 1994. Hybrid rice in China. **In:** Hybrid Rice Technology: New Development and Future Prospects (SS Virmani, ed). IRRI, the Philippines; **pp**.143-147.

Joshi BK, KP Shrestha, A Mudwari, SP Khatiwada, BK Baniya and BR Sthapit. 2003. Process documentation on deployment of rice and buckwheat diversity through participatory varietal selection for specific adaptation. **In:** On-farm Management of Agricultural Biodiversity in Nepal (B Sthapit, M Upadhyay and BK Joshi, eds). Proc. National Workshop, 24-26 April 2001, Lumle; NARC, LIBIRD and IPGRI; **pp.**229-232.

#### Annual Report

NWRP. 1980. Rice-wheat system: Opportunities and constraints. **In:** Annual Report 1980. National Wheat Research Program (NWRP), Nepal Agricultural Research Council, Bhairahawa, Rupandehi, Nepal; **pp.**60-65.

Genebank. 2013. Annual Report 2069/70 (2011/12) (BK Joshi, KH Ghimire and D Singh, eds). National Agriculture Genetic Resources Center (Genebank), NARC, Khumaltar.

#### Serials, Newsletter

Joshi BK, MR Bhatta and KH Ghimire. 2013. Shali Dhan: Elite line of rice from Far West Nepal developed under the pre-breeding program in Genebank, Khumaltar. NARC Newsletter **20**(4):5.

#### Web Material

Pretty J. 2003. Genetic modification: Overview of benefits and risks. <http://www2.essex.ac.uk/ces/>.

#### Thesis and Dissertation

Joshi BK. 2000. Assessment of the potential of Nepalese rice cultivars and landraces for hybrid production. Master Thesis. Institute of Agriculture and Animal Science, Rampur, Nepal.

#### Paper Presented in Workshop or Seminar

Generally don't cite presentation, in case of necessity followed this style. Author can consider abstract publication of such workshop.

Upadhyay MP, BK Baniya, BK Joshi, HB KC and D Gauchan. 2003. On-farm management of agrobiodiversity: Experiences of Nepal. **Paper presented in:** International Conference on Himalayan Biodiversity (ICHB 2003), 26-28 Feb 2003, Kathmandu.

#### Personal Communication and Unpublished Article

These can be mentioned directly in the text in parenthesis (eg RC Sharma 2014 personal communication, TB Gurung 2016 email correspondence).

#### Nepali Language References

If references are in Nepali languages, first write authors' name and year in English and write title in Roman. Remaining parts eg publisher, address, page number, etc are same as other publications and at last write In Nepali language) within parenthesis.

Khatri BH, BP Luitel and D Chaudhary. 2015. Nepalma Sifarish tatha unmochan gariyeko aaluko jaatharu: Ek parichaya. NPRP, NARC, Khumaltar (in Nepali language).

#### Thesis or Dissertation

If the manuscript to be published is from his/her thesis or dissertation, it should be indicated at the footnote of the first page.

**Table:** Each **Table** with a number and proper title heading should be prepared and sorted appropriately. Use the following symbols for footnotes in the order shown: †, ‡, §, ¶, #, ††, ‡‡, etc. The single (\*) and double asterisks (\*\*) are used to indicate statistical significance and have priority in this order to show 5 and 1% levels of significance, respectively. Do not repeat information in the text presented in charts or graph. Use 9 font size and bold word **Table, Table** caption and column headings with only horizontal lines. When necessary, provide actual p-value.

**Figure:** Each **Figure** and/or graph with a number and the proper title heading should be drawn or prepared. **Figure**/picture should be with good color so it can be printed well in black and white. Use 9 font size and bold word **Figure**, use period (.) at the end of caption. Provide **Figure** both in Word and Excel format or original picture with high resolution (editable one). If there are many images, they can be arranged in tabular cells. Do not abbreviate **Figure** as Fig. if there is no line at the bottom of any drawing, underline the drawing to separate such picture from its caption.

So far as possible, Table and Figure should be either one-column width or two-column width in portrait orientation.

**Page Limit:** The page limit for the main research article is 12 typed pages in single space including **Tables, Figures** and References.

#### Format for Review or Feature Articles

The review or feature article is much different from the main research articles in that it contains detailed description of certain topics researched or investigated earlier by concerned scientists or technicians. As in the main research article, it should contain abstract not exceeding 250 to 300 words. Each topic should have an appropriate heading and/or sub-headings with relevant **Tables** and **Figures** numbered separately but

sequentially for each review article. At the end of each article, all discussed items should be summarized and the conclusion should be drawn. All the relevant references should be cited. Authors are requested to choose modern topics of interests to the readers. The review or feature articles should not be of more than 20 pages.

### **Format for Research Notes**

The articles, which are not suitable to be published as main research articles but have some interesting and useful information, may be published as Research notes. In this type of paper, separate headings for introduction, materials and methods, results and discussion and references cited may not be necessary but concise forms of every part of the paper should be written in separate paragraphs. The relevant **Tables, Figures** and references may also be included. The article should be of three typed pages including **Tables, Figures** and references and other format should be as in main research article.

### **Statistical Methods**

Report enough details of experimental design, so that the results can be judged for validation and so that previous experiments may serve as a basis for the design of future experiments. A multiple comparison procedure may be useful when treatments consist of a set of unrelated materials (such as cultivars or chemicals), but may be inappropriate in other cases. When treatments are factorial their effects may be classified by partitioning into main effects and interactions. Specific relationships among treatments may be elucidated with single-degree-of-freedom contrasts (for further consult Joshi et al 2002 J. Institute Sci. Tech. **12**:69-81). Regression analyses are appropriate when treatments form a progressive series of an experimental factor. Report actual p value (p in small letter) in any test of significance.

Refers following papers for detail guidelines and instructions.

- Joshi BK and TB Gurung. 2018. Writing a Research Paper for NARC Journal. Journal of Nepal Agricultural Research Council **4**:90-99
- NARC Journal: Detail instructions and guidelines, Vol 4, 2018

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## **Checklist of papers submitted to J. Nep. Agric. Res. Counc.**

### **Content**

- Significance and originality of work are shown. Reproducibility of results is illustrated
- Objectives are clearly stated in the introduction
- Introduction includes a succinct evaluation of the topic, including all relevant literature citations
- Experimental design and methodology are fully explained
- Proper and sufficient analyses are conducted (review by qualified statistician before submission)
- Discussion relates work to other published material and addresses strengths and weaknesses of research
- Major conclusions are supported by results from repeated experiments. Manuscripts are reviewed critically before submission

### **Format**

- Normal text, paragraph and single spaced
- Numbered **Tables** and **Figures** sequentially and located in right place
- Do not use both common and scientific names for organisms in the title
- Full author names, affiliations, addresses, e-mail and telephone number included
- Consistent style, format and size are used for all **Figures** and **Tables**
- Subheadings may be used, but avoid, excessive fragmentation of the text.
- Words or phrases useful in index retrieval systems are listed in alphabetical order
- Abstract should be one paragraph. Do not underline and do not make 2-column

### **Writing**

- Give the name of the institute where the research was conducted and not the name of the institute where you are employed at present. If there is a change of address, give the present address as a footnote
- Specify location and the period during which the experiment was conducted.
- Use past tense for materials and methods and results in active voice
- Results should be specific, instead of being indicative
- Indicate date as 21 Jan 2015. Spell out the standard abbreviations when first mentioned
- Do not give data in **Table**, if they are depicted graphically or described in text
- Do not repeat ideas in different forms of sentences. Check and avoid all repetitions and duplications

- Do not acknowledge for official facilities or help or for encouragement etc
- Write Mr and Dr without full stops. Avoid period with initials of authors, acronyms, etc
- Do not cite anonymous as author, instead cite the name of the institute, publisher or editor
- Give only selected, recent references (priority to Nepalese). Avoid reference from non-science literature. Avoid comma between the surname of an author and its initial or the year of citation

### Supporting material

- Cover letter supplying the name of the corresponding author with address, phone and email address.
- Cover letter with names and addresses of potential reviewers as well as mentioning key findings.

### Submission

- Pay good attention on presentations of the article. Always consult a recent copy of our journal
- Check all data and references from original source
- Ensure that all references in the text find a place in the references part of article and vice versa
- The spellings of names and years should correspond in the text and references part
- Do not send the article for publication until it confirms in all respects to the style of the journal and has been checked very carefully. Before submission, check carefully all data and text for factual, grammatical or typographical errors. Send the article electronically
- On revision, please answer all the referees' comments point wise, indicating the modifications made by you. If you do not agree, give reasons for your disagreement with full justification
- Return the corrected electronic copies immediately

### Disclaimer

All opinions published in the journal reflect the views of author/s and are not necessarily the views of NARC and editorial board. The editorial board reserves the right to reject or accept any submitted manuscript. All final decision will be of the Editor-in-Chief. No complaints can be lodge against to the Journal and concern authorities for manuscript rejection, delay and changes in contents of the manuscript. The submission of the manuscript in the journal declares that all terms and conditions of the journal has been read and accepted by the authors.



## B. Abbreviations and Symbols that can be used without definition and period in Text, Table and Figure

ANOVA	ANalysis Of VAriance	PVS	Participatory Variety Selection
Approx.	approximately	r	correlation coefficient
Aug	August	rad	radian
avg	average	RAPD	Random Amplified Polymorphic DNA
b	regression coefficient	RCBD	Randomized Complete Block Design
BC	Before Christ	IPM	Integrated Pest Management
bp	boiling point	IPR	Intellectual Property Right
ca	circa, carib (about)	IRRI	International Rice Research Institute
CBD	Convention on Biological Diversity	IUCN	International Union for Conservation of Nature and Natural Resources (The world conservation union)
cf	confer (compare)	J	Joule
CGIAR	Consultative Group for International Agricultural Research	Jan	January
CIMMYT	Centro Internacional de Mejoramiento de maiz y Trigo (International Center for Maize and Wheat Improvement)	K	Kelvin (Thermodynamic temperature)
cm	centimeter	kg	kilogram
coef	coefficient	km	kilometer
conc	concentration	l	liter
CV	Coefficient of Variation	LD	Lethal Dose
cv	cultivar	ln	logarithm (natural)
CVT	Coordinated Varietal Trial	LoA	Latter of Agreement
d	day	log	logarithm (common, base 10)
Dec	December	LSD	Least Significant Difference
df	degree of freedom	lx	lux
DMRT	Duncan's Multiple Range Test	m	meter
DNA	DeoxyriboNucleic Acid	M	Molar
Dr	Doctor	masl	meter above sea level
eg	exempli gratia (for example)	RFLP	Restricted Fragment Length Polymorphism
ELISA	Enzyme Linked ImmunoSorbent Assay	RH	Relative Humidity
et al	et alii (and other)	RNA	RiboNucleic Acid
etc	et cetera (and so on)	rpm	revolutions per minute
expt	experiment	RRA	Rapid Rural Appraisal
exptl	experimental	Rs	Rupees
max	maximum	s	second
min	minimum	S <sup>2</sup>	variance
mm	millimeter	SD	Standard Deviation
mol	mole	SE	Standard Error (of the mean)
mol	molecular	SED	Standard Error of the difference
wt	weight	SEM	Standard Error of the Mean
MoU	Memorandum of Understanding	Sept	September
mp	melting point	sp	species (sing)
mph	miles per hour	sp gr	specific gravity
Mr	Mister	spp	species (pl)
Ms	Miss, Misters	SSR	Simple Sequence Repeat tonne,
MSc	Master of Science	t	metric ton
n	Number, unit	t	Student's t
n	Sample size, unit	temp	temperature
NARC	Nepal Agricultural Research Council	TRIPS	Trade Related Intellectual Property Rights
NGO	Non Government Organization	UN	United Nations
		UNDP	United Nations Development Program
nm	nanometer	UPGMA	Unweighted Pair Group Method, Arithmetic mean
psi	pounds per square inch	UV	Ultraviolet
no	number	V	Volt

Nov	November	v/v	volume/volume (conc)
ns	not significant	var	variety
°C	Degree centigrade	VDC	Village Development Committee
Oct	October	viz	videlicet (namely)
°F	Degree Fahrenheit	vol	volume
PCA	Principle Component Analysis	vs	versus
PCR	Polymerase Chain Reaction	W	Watt
PGR	Plant Genetic Resource	w/v	weight/volume (conc)
pH	The negative logarithm of the hydrogen ion concentration	wk	week
PhD	Doctor of Philosophy	wt	weight
pm	post merideim (after noon)	WTO	World Trade Organization
PPB	Participatory Plant Breeding	yr	year
ppm	part per million	yrs	years
PRA	Participatory Rural Appraisal		

### C. Abbreviation for Units of Measurement

The metric system is adopted as standard. If non-standard abbreviations must be used they should be defined in the text

Units of quantity		Units of temperature	
kilo	k	Celsius	°C
mega	M	Kelvin	K
giga	G	Additional physical unit	
tera	T	dalton	Da
milli	m	hertz	Hz
micro	μ	joule	J
nano	n	volt	V
pico	p	watt	W
Units of length		Relative units	
meter	m	parts/million parts	ppm
kilometer	km	parts/billion parts	ppb
centimeter	cm	parts/trillion parts	ppt
millimeter	mm	percentage	%
micrometer	μm	weight	w
nanometer	nm	volume	V
Units of area		Units of electrical conductivity	
square meter	m <sup>2</sup>	siemens per meter	S/m
kilometer	km <sup>2</sup>	millisiemens per meter	mS/m
hectare (10 000 m <sup>2</sup> )	ha	(mS/cm; μS/cm)	
square centimeter	cm <sup>2</sup>	ohm	Ω
square millimeter	mm <sup>2</sup>	Units of concentration	
Units of volume		mole per kilogram (liter)	mol/kg (mol/L)
cubic meter	m <sup>3</sup>	millimole (micromole)	mmol/kg
cubic centimeter	cm <sup>3</sup>	per kilogram	μmol/kg
liter	L	gram per kilogram	g/kg
milliliter	mL	milligram per kilogram	mg/kg
microliter	μL	microgram per kilogram	μg/kg
Units of mass		Similar units for volume	
gram	g	g/L, mg/L, mg/mL, μg/L, μg/mL	
kilogram	kg	Units of irradiation	
tonne	t	watt per square meter	W/m <sup>2</sup>
milligram	mg	Units of photon flux density	
microgram	μg	mol per square meter per second	mol/m <sup>2</sup> /s
Units of density		Units of yield, sampling and rate	
g/cm <sup>3</sup> , kg/m <sup>3</sup> , t/m <sup>3</sup> , g/L, kg/L		kilogram per hectare	kg/ha
Units of pressure		tonnes per hectare	t/ha
pascal	Pa	liter per hectare	L/ha
Mega pascal	MPa	gram per hectare	g/ha
Units of time		gram per square meter	g/m <sup>2</sup>
second	s	gram per kilogram	g/kg
minute	min	milligram per kilogram	mg/kg
hour	h	mmol of chemical equivalent per kilogram of soil or another materials	mmol+/kg
day, week, year	d, wk, yr		

### D. Symbols and Abbreviations related to Statistics, Chemistry, Genetics and Plant Breeding



analysis of variance	ANOVA	probability	P
calcium sulphate	CaSO <sub>4</sub>	sample size	n
cation exchange capacity	CEC	simple correlation coefficient	r
coefficient of determination	R <sup>2</sup>	standard deviation (sample)	SD
coefficient of variation	CV	standard error	SE
degree of freedom	df	standard error of mean	SEM
dry weight (matter)	DW (DM)	standard error of the differences	SED
F-distribution	F	t-(or Student) test	t
fresh weight	FW (FM)	variance (sample)	s <sup>2</sup>
kg per ha	kg/ha	X or /	Crossing
least significant difference	LSD	Mean	$\bar{X}$

#### E. Abbreviated Journal Titles

We prefer full name for journals even though one can use following abbreviated names for journals in the references list. If a journal has single word name, it is not abbreviated.

#### Terms without abbreviation

Acta	Genes
Cell	Growth
Drug	Maydica
Fauna	Plant
Fish	Planta
Flora	Sea
Food	Soil
Gene	Weed

#### Abbreviated terms

Abstract, Abstracts	Abstr.	Conservation	Conserv.
Academical, Academy	Acad.	Contribuciones, Contribution	Contrib.
Advances	Adv.	Current	Curr.
African	Afr.	Department	Dep.
Agriculture, Agricultural	Agric.	Development, Developmental	Dev.
Agronomy	Agron.	Diseases	Dis.
America, American	Am.	Diversity	Diver.
Analytical	Anal.	Division	Div.
Anatomical	Anat.	Ecology	Ecol.
Animal	Anim.	Economics	Econ.
Annals	Ann.	Edition	Ed.
Annual	Annu.	Education, Educational	Educ.
Anthropological	Anthrop.	Electric	Electr.
Antibiotic	Antibiot.	Engineering	Eng.
Applied	Appl.	Entomological, Entomology	Entomol.
Aquatic	Aquat.	Environment, Environmental	Environ.
Archive, Archives	Arch.	Ethnology	Ethnol.
Association, Associates	Assoc.	Europe, European	Eur.
Atom, Atomic	At.	Evolution	Evol.
Australian	Aust.	Experimental	Exp.
Bacteriology, Bacteriologist	Bacteriol.	Federal, Federation	Fed.
Behaviour	Behav.	Fertilizer, Fertility	Fert.
Biochemie, Biochemistry, Biochemical	Biochem.	Fisheries	Fish.
Biodiversity	Biod.	Forestry, Forest	For.
Biological, Biologie	Biol.	Garden	Gard.
Biometrical, Biometry	Biometr.	Gazette	Gaz.
Biomolecular	Biomol.	General	Gen.
Biophysics	Biophys.	Genetic, Genetics	Genet.
Botanica, Botanical, Botany	Bot.	Geographical, Geography	Geogr.
British	Br.	Geologica, Geological, Geology	Geol.
Bulletin	Bull.	History	Hist.
Bureau	Bur.	Immune	Immun.
Canada, Canadian	Can.	Immunology	Immunol.
Cardiology	Cardiol.	India	Ind.

Cellular	Cell.	Information	Info.
Chemical, Chemistry	Chem.	Institute	Inst.
Chemotherapy	Chemother.	Interaction	Interact.
Commonwealth	Commw.	Japan, Japanese	Jap.
Communications	Commun.	Journal	J.
Comparative	Comp.	Laboratory London	Lab. Lond.
Computation, Computer, Computers, Computing	Comput.	Magazine	Mag.
Conference	Conf.	Management	Manage.
Congress	Congr.	Manual	Man.
Mechanical	Mech.	Mathematical, Mathematics	Math.
Medical, Medicinal	Med.	Psychological	Psychol.
Microbiological, Microbiology	Microbiol.	Publication	Publ.
Molecular	Mol.	Quarterly	Q.
Monographs	Monogr.	Regulation	Regul.
Morphology	Morphol.	Report	Rep.
Mountain	Mount.	Research	Res.
National	Natl.	Resources	Resour.
Natural, Naturalist, Nature	Nat.	Review	Rev.
Nepal	Nep.	Scandinavian	Scand.
Netherlands	Neth.	Science, Scientific, Scientist	Sci.
Neurology	Neurol.	Society	Soc.
Newsletter	Newslett.	Special	Spec.
Nuclear	Nucl.	Station	Stn.
Nutrition	Nutr.	Structure	Struct.
Obstetrician	Obstet.	Supplement	Suppl.
Official	Off.	Surgery	Surg.
Organic	Org.	Survey	Surv.
Orientalis	Orient.	Symposia, Symposium	Symp.
Pakistan	Pak.	Systematics	Syst.
Pharmacology	Pharmacol.	Technical	Tech.
Philippines	Philip.	Technology	Technol.
Philosophical	Philos.	Therapeutics	Ther.
Physic, Physical, Physics	Phys.	Topics	Top.
Physiology	Physiol.	Transactions	Trans.
Planning	Plan.	Tropical	Trop.
Pollution	Pollut.	University	Univ.
Practical, Practice	Prac.	Veterinary	Vet.
Proceedings	Proc.	Virology	Virol.
		Zoology, Zoologie	Zool.

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