



Instructions for the Preparation of Manuscript for the Journal of the Indian Society of Soil Science

Prospective author(s) are advised to consult a latest issue of the Journal and get himself/ herself/ themselves acquainted with the minor details of the format and style of the Journal. Meticulous compliance with the instructions given below will help quick handling of the manuscript by the reviewers, editors, and printers.

1. General

Full-length articles, short communications, and book reviews, and review articles are published in the Journal. Review articles and book reviews are only by invitation. Full-length articles and short communications should report results of original investigations in Soil Science or kindred branches of science. **Choice of conveying the paper(s) either as full length paper or short communication rests with the authors. The Editor(s) or Reviewer(s) will examine their suitability or otherwise only in that specific category.** Each article should be written in English correctly, clearly, objectively, and concisely. All the statements made in the manuscript should be clear, unambiguous, and to the point. Telegraphic languages should be avoided. The data should be reported in a coherent sequence.

2. Manuscript

Language of the Journal is English. Generally, the length of an article should not exceed 3,000 words in the case of full-length article and 750 words in the case of short communication. However completeness of information is more important. Each half-page table or illustration should be taken as equivalent to 200 words.

It is desirable to submit manuscript in the form of soft copy in a compact disk (CD) or 3.5" floppy diskette (in MS Word document; double line space; Times New Roman/ Courier font; font size 12) along

with two hard copies of the manuscript in A4 size for faster handling and processing. Where facilities for computer typesetting are not available, two copies of the manuscript, typed on a good quality typing paper (foolscap or quarto size) or on bond paper and never on flimsily thin typing paper, should be submitted. To

avoid hassels of the likely damage to the CD or Floppy during the postal transit, the soft copy should preferably submitted through email on **iss1934@yahoo.com**. In case of typed manuscripts, typing must be done only on one side of the paper, leaving sufficient margin, at least 4 cm on the left-hand side and 3 cm on the other three sides. Faded typewriter ribbon should

Important Instructions

- (i) Data on field experiments have to be at least for a period of 2-3 years
- (ii) Papers on pot experiments will be considered for publication only as short communications
- (iii) Giving coefficient of variation in the case of field experiments, standard deviation and standard error in the case of laboratory determination is mandatory. For rigorous statistical treatment, journals like Journal of Agricultural Science Cambridge, Experimental Agriculture and Soil Use and Management should serve as eye openers.

not be used. **Double space typing is essential throughout the manuscript, right from the Title through References (except tables). Manuscripts should be prepared with numbered lines, with wide margins and double spacing throughout, i.e. also for abstracts, footnotes and references.** Every page of the manuscript, including the title page, references, tables, etc. should be numbered.

Punctuation marks help to show the meanings of words by grouping them into sentences, clauses, and phrases and in other ways. These marks should be used in proper manner if the reader of a paper is to understand exactly the intended meaning.

Typeset (one soft copy + two hard copies) or typed manuscript (one top copy and a carbon copy), complete in all respects, are to be submitted to the Secretary, Indian Society of Soil Science, Division of Soil Science and Agricultural Chemistry, Indian Agricultural Research Institute, New Delhi 110 012.

This will be acknowledged by the office of the Society, giving a paper number which should be quoted

in all subsequent correspondence regarding that particular manuscript.

3. Full-length Articles

Organization of the Manuscript

Before reading the instructions given below, the author(s) would better have a close look at the latest issue of the Journal.

Full-length article comprises the following sections.

- (a) Short title
- (b) Title
- (c) Author/Authors
- (d) Institution and Address with PIN (postal) code
- (e) Abstract (along with key words)
- (f) Introduction
- (g) Materials and Methods
- (h) Results and Discussion
- (i) Conclusions
- (j) Acknowledgments (if any)
- (k) References
- (l) Tables and figures (if any)

Guidelines for each section are as follows:

All these headings or matter thereof should start from left hand side of the margin, without any indent.

Short Title

A shortened title (approximately of 30 characters) set in capital letters should convey the main theme of the paper.

Title

Except for prepositions, conjunctions, pronouns and articles, the first letter of each word should be in capital letter. The title should be short and should contain key words and phrases to indicate the contents of the paper and be attractive. Jargons and telegraphic words should be avoided. In many cases, actual reading of the paper may depend on the attractiveness of the title.

Author/Authors

The name(s) of author(s) should be typed in capital letters a little below the title, starting from the left margin. Put an asterisk on the name of the corresponding author. *Give the Email ID of the corresponding author as a footnote.*

Institution and Address

This matter will come below the name(s) of the author(s). Name of the Laboratory/Department, followed by the name of the Institution/Organization/University

where the work reported in the paper was carried out shall come below the name(s) of author(s). Complete postal address, which should include city/town, district, and state, followed by PIN (postal) code is to be furnished. In case any author has left the above address, this should be indicated as a footnote.

Abstract

The paragraph should start with the word Abstract (in bold font), followed by colon (:). The abstract should comprise a brief and factual summary or salient points of the contents and the conclusions of the investigation reported in the paper and should refer to any new information therein. As the abstract is an independent entity, it should be able to convey the gist of the paper in a concise manner. It will be seen by many more people than will read the paper. The abstract, as concise as possible, should not exceed 250 words in length. Everything that is important in the paper must be reflected in the abstract. It should provide to the reader very briefly the rationale, objectives or hypothesis, methods, results and conclusions of the study described in the paper. In the abstract, do not deflect the reader with promises such as 'will be discussed' or 'will be explained'. Also do not include reference, figure or table citation. At first mention in the abstract, give complete scientific name for plants and other organisms, the full names of chemicals and the description of soil series. Any such names or descriptions from the abstract need not be repeated in the text. It must be remembered that the abstracting journals place a great emphasis on the abstract in the selection of papers for abstracting. If properly prepared, they may reproduce it verbatim. "Key words" should, in parenthesis, follow the last sentence of the abstract. "Key words" indicate the most important materials, operations, or ideas covered in the paper. Key words are used in indexing the articles.

Introduction

(Not to be typed as a heading; but the beginning of the main text should be indicated by putting a short line below the Abstract in the middle of the page)

This section is meant to introduce the subject of the paper. Introduction should be short, concise and indicate the objectives and scope of the investigation. To orient readers, give a brief reference to previous concepts and research. Limit literature references to essential information. When new references are available, do not use old references unless it is of historical importance or a landmark in that field. Emphasis should be given among other things on citing the literature on

work done under Indian conditions. Introduction must include: (a) a brief statement of the problem, justifying the need for doing the work or the hypothesis on which the work is based, (b) the findings of others that will be further developed or challenged, and (c) an explanation of the approach to be followed and the objectives of the research described in the paper. If the methods employed in the paper are new, it must be indicated in the introduction section.

Materials and Methods

(To be typed as side-heading, starting from the left-hand margin, a few spaces below the introduction)

This part of the text should comprise the materials used in the investigation, methods of experiment and analysis adopted. This portion should be self-explanatory and have the requisite information needed for understanding and assessing the results reported subsequently. Enough details should be provided in this section to allow a competent scientist to repeat the experiments, mentally or in fact. The geographical position of soil site or soils used in the experiment or site of field trial should be identified clearly with the help of coordinates (latitude & longitude) and invariably proper classification according to Soil Taxonomy (USDA), must be indicated to the level of Great-group, Suborder or Order as far as possible. For materials, give the appropriate technical specifications and quantities and source or method of preparation. Should a product be identified by trade name, add the name and location of the manufacturer or a major distributor in parenthesis after the first mention of the product. Known methods of analysis should be indicated by referring to the original source, avoiding detailed description. Any new technique developed and followed should be described in fair detail. When some specially procured or proprietary materials are used, give their pertinent chemical and physical properties. Any plants, animals, organisms and soils not already mentioned in the abstract should be identified accurately by scientific name. References for the methods used in the study should be cited. If the techniques are widely familiar, use only their names in that case.

Results and Discussion

(To be typed as a side-heading, a few spaces below the matter on "Materials and Methods")

This section should discuss the salient points of observation and critical interpretation thereof. This should not be descriptive and mere recital of the data presented in the tables and diagrams. Unnecessary details must be avoided but at the same time significant

findings and special features should be highlighted. For systematic discussion, this section may be divided into sub-sections under side-heading and/or paragraph side heading. Relate the results to your objectives. While discussing the results, give particular attention to the problem, question or hypothesis presented in the introduction. Explain the principles, relationships, and generalizations that can be supported by the results. Point out any exceptions. Explain how the results relate to previous findings, support, contradict or simply add as data. Use the Discussion section to focus on the meaning of your findings rather than recapitulating them. Scientific speculation is encouraged but it should be reasonable and firmly founded in observations. When results differ from previous results, possible explanations should be given. Controversial issues should be discussed clearly.

References to published work should be cited in the text by the name(s) of author(s) as follows:

Mukherjee and Mitra (1942) have shown or It has been shown (Mukherjee and Mitra, 1942).....

If there are more than two authors, this should be indicated by *et al.* after the surname of the first author, *e.g.*, Mukherjee *et al.* (1938).

Conclusions

(To be typed as side-heading, starting from the left-hand margin, a few spaces below the "Results and Discussion")

This section should clearly crystallize the summary of the results obtained along with their implications in solution of the practical problems or contribution to the advancement of the scientific knowledge.

Acknowledgments

(To be typed as given above, as a side-heading, well below the concluding portion of Conclusions)

The author(s) may place on record the help, and cooperation, or financial help received from any source, person or organization. This should be very brief, and omitted, if not necessary.

References

(To be typed as above, as side heading below Acknowledgment)

The list of references must include all published work referred to in the text. References should be arranged alphabetically according to the surnames of the individual authors or first authors. Two or more references by the same author are to be cited chronologically; two or more in the same year by the letters a, b, c, *etc.* All individually authored articles precede those in which the individual is the first or joint author.

Every reference cited in the article should be included in the list of References. This needs rigorous checking of each reference. The reference citation should follow the order: author(s), year of publication (within parenthesis), title of the paper, periodical (title in full, no abbreviations, italics or underlined), volume (bold or double underlining), starting and ending pages of the paper. For punctuation, a latest issue of the Journal must be consulted. Reference to a book includes authors(s), year (in parenthesis), title (first letter of each word except preposition, conjunction, and pronouns in capitals and underlined), the edition (if other than first), the publisher, city of publication. If necessary, particular page numbers should be mentioned in the last.

Year of publication cited in the text should be checked with that given under References. Year, volume number and page number of each periodical cited under "References" must be checked with the original source. The list of references should be typed as follows:

- Black, C.A. (1968) *Soil-Plant Relationships*, Second Edition, John Wiley and Sons, New York. pp 40-45.
- Kanwar, J.S. and Raychaudhuri, S.P. (1971) *Review of Soil Research in India*, Indian Society of Soil Science, New Delhi. pp 30-36.
- Mukherjee, J.N. (1953) The need for delineating the basic soil and climatic regions of importance to the plant industry. *Journal of the Indian Society of Soil Science* **1**, 1-6.
- Khan, S.K., Mohanty, S.K. and Chalam, A.B. (1986) Integrated management of organic manure and fertilizer nitrogen for rice. *Journal of the Indian Society of Soil Science* **34**, 505-509.
- Thind, H.S., Bhajan Singh and Gill, M.S. (1984) Relative efficiency of nitrogenous fertilizers for rice-wheat rotation. In: Nitrogen in Soils, Crops and Fertilizers, *Bulletin of the Indian Society of Soil Science* **13**, 181-184.
- Bijay-Singh and Yadvinder-Singh (1997) Green manuring and biological N fixation: North Indian perspective. In: *Plant Nutrient Needs, Supply, Efficiency and Policy Issues: 2000-2025* (J.S. Kanwar and J.C. Katyal, Eds.), pp 29-44. National Academy of Agricultural Sciences, New Delhi, India.

Reference to unpublished work should normally be avoided and if unavoidable it may be mentioned only in the text.

4. Short Communication

Conceptually short communication is a first report

on new concept, ideas and methodology which the author(s) would wish to share with the scientific community and that the detailed paper would follow. Short Communication is akin to an advance booking for the report on the findings. Short communications may include short but trend-setting reports of field or laboratory observation(s), preliminary results of long-term projects, or new techniques or those matters on which enough information to warrant its publication as a full-length article has still not been generated but the results need to be shared immediately with the scientific community. The style is less formal as compared with the "full-length" article. In the short communications, the sections on abstract, materials and methods, results and discussion, and conclusion are omitted; but the material is put concisely in the same sequence but without formal sections. The other instructions are the same as in the case of the full-length articles.

5. Tables

Each table should be typed on separate sheet and should have on the top a table number and a caption or title which should be short, but sufficiently explanatory of the data included in the table. Information in the table should never duplicate that in the text and *vice versa*. Symbols (asterisks, daggers, *etc.* or small letters, viz., a, b, *etc.*) should be used to indicate footnotes to tables. Maximum size of table acceptable is what can be conveniently composed within one full printed page of the journal. Over-sized tables will be rejected out-right. Such tables may be suitably split into two or more small tables. The data in tables should be corrected to minimum place of decimal so as to make it more meaningful. Tables should be numbered consecutively and their approximate positions indicated in the margin of the manuscript. Tables may be inserted in the body of the text. All the tables should be tagged with the main body of the text *i.e.* after references.

6. Figures

Figures include diagrams and photographs. Laser print outs of line diagrams are acceptable while dotmatrix print outs will be rejected. Alternatively, each illustration can be drawn on white art card or tracing cloth/paper, using proper stencil. The lines should be bold and of uniform thickness. The numbers and letterings must be stenciled; free-hand drawing will not be accepted. Size of the illustrations as well as numbers, and letterings should be sufficiently large to stand suitable reduction in size. Overall size of the illustrations should be such that on reduction, the size will be the width of single or double column of the printed page of the

Journal. Legends, if any, should be included within the illustration. Each illustration should have a number followed by a caption typed/ typeset well below the illustration. Title of the article and name(s) of the author(s) should be written sufficiently below the caption. The photographs (black and white) should have a glossy finish with sharp contrast between the light and the dark areas. Colour photographs/ figures are not normally accepted. **One set of the original figures must be submitted along with the manuscript, while the second set can be photocopy.**

The illustrations should be numbered consecutively in the order in which they are mentioned in the text. The position of each figure should be indicated in the margin of the text. The photographs should be securely enclosed with the manuscript after placing them in hard board pouches so that there may not be any crack or fold. The captions for all the illustrations (including photographs) should be typed on a separate sheet of paper and placed after the tables.

7. Expression of Plant Nutrients on Elemental Basis

The amounts and proportions of nutrient elements must be expressed in elemental forms *e.g.* for ion uptake or in other ways as needed for theoretical purposes. *In expressing doses of nitrogen, phosphatic, and potassic fertilizers also these should be in the form of N, P and K, respectively.* While these should be expressed in terms of kg ha⁻¹ for field experiments, for pot culture studies the unit should be in mg kg⁻¹ soil.

8. SI Units and Symbols

SI Units (System International d 'Unities or International System of Units) should be used. The SI contains three classes of units: (i) base units, (ii) derived units, and (iii) supplementary units. To denote multiples and sub-multiples of units, standard abbreviations are to be used.

Clark's Tables : Science Data Book by Orient Longman, New Delhi (1982) may be consulted. Some of these units along with the corresponding symbols are reproduced for the sake of convenience.

Names and Symbols of SI Units

<i>Physical quantity</i>	<i>Symbol for physical quantity</i>	<i>SI Unit</i>	<i>Symbol for SI Unit</i>	<i>Remarks</i>
Primary Units				
Length	l	metre	m	
Mass	m	kilogram	kg	
Time	t	second	s	
Electric current	I	ampere	A	
Thermodynamic temperature	T	kelvin	K	<i>The symbol (°) and the word degree should not be used with kelvin</i>
Luminous intensity	I _v	candela	cd	
Quantity of substance	n	mole	mol	<i>Not yet officially adopted</i>
Secondary Units				
Plane angle		radian	rad	
Solid angle		steradian	sr	

Derived SI Units with Special Names

<i>Physical quantity</i>	<i>Symbol for physical quantity</i>	<i>SI Unit</i>	<i>Symbol for SI Unit</i>	<i>Relation to other SI Units</i>
Force	F	newton	N	kg m s ⁻²
Energy	E, W	joule	J	Nm
Power	P	watt	W	J s ⁻¹
Electric charge	Q	coulomb	C	A s
Electric potential	V	volt	V	J Q ⁻¹
Electric resistance	R	ohm	Ω	V A ⁻¹
Frequency	f	hertz	Hz	s ⁻¹
Temperature	t	degree Celsius	°C	t °C

Metric Multiples and Sub-multiples

<i>Prefix</i>	<i>Abbreviation</i>	<i>Value</i>	<i>Prefix</i>	<i>Abbreviation</i>	<i>Value</i>
yotta	Y	10 ²⁴	deci	d	10 ⁻¹
zetta	Z	10 ²¹	centi	c	10 ⁻²
exa	E	10 ¹⁸	milli	m	10 ⁻³
peta	P	10 ¹⁵	micro	μ	10 ⁻⁶
tera	T	10 ¹²	nano	n	10 ⁻⁹
giga	G	10 ⁹	pico	p	10 ⁻¹²
mega	M	10 ⁶	femto	f	10 ⁻¹⁵
kilo	k	10 ³	atto	a	10 ⁻¹⁸
hecto	h	10 ²	zepto	z	10 ⁻²¹
deka	da	10 ¹	yocto	y	10 ⁻²⁴

<i>Unit</i>	<i>Symbol</i>
centimetre	cm
cubic centimetre	cm ³
cubic metre	m ³
day	d
decisiemens	dS
degree-Celsius	°C [= (°F - 32) × 0.556]
gram	g
hectare	ha (10 ⁴ m ²)
hour	h
joule	J (=10 ⁷ erg or 4.19 cal.)
kelvin	K (= °C + 273)
kilogram	kg
kilometre	km
litre	L (= dm ³)
metre	m
megagram	Mg (= 10 ³ kg or 10 ⁶ g)
microgram	μg (= 10 ⁻⁶ g)
micron	μm (= 10 ⁻⁶ m)
micronmol	μmol
milligram	mg
millilitre	mL
minute	min
nanometre	nm (10 ⁻⁹ m)
newton	N (= 10 ⁵ dynes)
pascal	Pa (= N m ⁻²)
second	s
square centimetre	cm ²
square kilometre	km ²
tonne	t (Mg, 10 ⁶ g or 10 ³ kg)
watt	W (=10 ⁷ erg s ⁻¹)
year	a

Some applications along with symbols

adsorption energy: J mol⁻¹ (= cal mol⁻¹ × 4.19)

cation exchange capacity: cmol (p⁺)kg⁻¹
(= m.e. 100 g⁻¹)

electrolytic conductivity: dS m⁻¹ (= mmhos cm⁻¹)

evapotranspiration rate: m³ m⁻² s⁻¹ (or) m s⁻¹

heat flux: W m⁻²
gas diffusion: g m⁻² s⁻¹ or mol m⁻² s⁻¹
water flow: kg m² s⁻¹ (or) m³ m⁻² s⁻¹ (or) m s⁻¹
gas diffusivity: m² s⁻¹
hydraulic conductivity: m s⁻¹
ion uptake (per kg of dry plant material): mol kg⁻¹
leaf area: m² kg⁻¹
mineral spacing: nm (= Å × 0.1)
nutrient content in plants μg g⁻¹, mg g⁻¹ or g kg⁻¹ (dry matter basis)
root density or root length density: m m⁻³
soil bulk density: Mg m⁻³ (=g cm⁻³)
specific heat: J kg⁻¹ K⁻¹
specific surface area of soil: m² kg⁻¹
thermal conductivity: W m⁻¹ K⁻¹
transpiration rate: mg m⁻² s⁻¹
water content of soil: kg kg⁻¹ or m³ m⁻³
water tension: kPa (or) MPa
yield (grain or forage): Mg ha⁻¹ (= t ha⁻¹)

In reporting the data, dimensional units, viz., M (mass), L (length), and T (time) should be used as shown under some applications above. Some examples are: 120 kg N ha⁻¹; 5 Mg ha⁻¹ or 5 t ha⁻¹; 4 dS m⁻¹; 1.6 Mg m⁻³, etc.

9. Special Instructions

- (i) In a series or range of measurements, mention the unit only at the end, e.g. 2 to 6 cm⁻³, 3, 6, and 9 cm, etc.
- (ii) Any unfamiliar abbreviation must be identified fully (in parenthesis).
- (iii) A sentence should not begin with an abbreviation.
- (iv) Numeral should be used whenever it is followed by a unit measure or its abbreviations, e.g., 1 g, 3 m, 5 h, 6 months, etc. Otherwise, words should be used for numbers one to nine and numerals for larger ones except in a series of numbers when numerals should be used for all in the series.