

WRITING RESEARCH ARTICLES FOR REFEREED JOURNALS

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ABSTRACT

Refereed journals publish research articles that possess quality work along with a proper, yet concise presentation of findings. Although some differences in presentation and contents exist among the refereed journals but the basic concept and theme of manuscript writing are similar and these are briefly described in this paper.

Additional Key Words: Manuscript writing, paper writing

INTRODUCTION

In fact, there are many publications containing scientific facts and figures published by professional societies. The name of their titles may or may not have the word "Journal". The frequency of publication is in a specified duration and on time; they have volume and issue numbers. Such journals/publications are considered refereed journals. Articles published in such refereed journals possess weightage more as they are peer reviewed. Most university research scientists or the personnel working on research activities usually publish their papers in the refereed journals. Writing skills, work quality, proper formatting are requisits for peer-reviewing that decides acceptance of the manuscripts. In this paper, components of a manuscript that is targeted for publishing in most of the refereed journals are dealt along with some hints that must be kept in author's mind while writing the text.

A. COMPONENTS OF A RESEARCH ARTICLE

Running citation

The running citation for each article submitted for publication should appear above the boldface title of the paper. The name of the journal is abbreviated and pagination is given. When the article is accepted and galley proof made, the complete citation will be added to the manuscript by the Editor-in-Chief.

Running title

In every alternate page to the running citation page, the 4 to 6 words running title should be given at the upper right margin of the page.

Title

It should be a precise and concise description of the paper limiting 10 to 12 words that help for proper indexing and facilitate information retrieval. The phrases such as "influence of", "effects of", etc. are usually avoided from the title. Uses of common names of plants and animals are preferred in the title. But, in case of little known species scientific name is used in the title; the name of the authority should be omitted.

Author's name

The name of the author (s) should be given on only one line, marked with an asterisk (*) at the end. The name(s) must be written exactly as you want to see in the paper.

Footnotes

To facilitate proper mailing and correspondence authors' addresses should be given on footnotes referring the asterisk mark (*) on the title page of the manuscript.

Additional key words

Give a list of 3 to 6 key words that are not used in the title. This helps in cumulative indexes and for information retrieval. These may include scientific names (without authority, if not appeared in the title), common names of plant and animal species, physiological and pathological terms, etc. Some preferred key words are:

- | | |
|-------------------------|--|
| a. Horticultural crops: | Fruits, nuts, citrus, ornamentals etc. |
| b. Physiology: | Biassay, hardiness, juvenility etc. |
| c. Structure: | Bud, flower, fruit, pollen, etc. |
| d. Reproduction: | Breeding, radiation, mutation, etc. |
| e. Environments: | Light, mycorrhizae, humidity, etc. |
| f. Cultural: | Defoliant, hydroponics, mulch, etc. |
| g. Plant protection: | Repellents, fungicides, resistance, etc. |

Abstract

The abstract (usually less than 200 words) should be a concise, one paragraph summation of the findings. Reference citation and discussion are not needed. It should include objectives of the study, materials and methods used, effects of major treatments and major conclusions.

Introduction

It should start on a separate page. General statements are discouraged. It should focus problem-directed statements. References to earlier works should be cited, if applicable. The major emphasis should be given to identify problems and develop the objectives.

Materials and methods

Enough information are required in this section to indicate how the research was conducted. Also the specifications, quantities, and source or method of material preparation are dealt. Well-known tests or methods may be cited. Statistical design and analytical methods and works should be given in brief.

Results and discussion

To avoid the repetition of the facts and figures usually results and discussion are combined, except in some journals. As this is the most important part of research, report and discuss only the relevant findings. It should compare and explain any differences in the results within the experiment or contrary to previous reports. Cite references to support or contradict the present findings. It is always better to give your findings first, then the supporting documents. Also discuss any practical applications of the study and possible areas for future research.

Conclusion and recommendation

This section may or may not be given depending upon the nature of the research carried out. If this part (as a separate section) is not needed close the discussion chapter with a brief, pertinent conclusive statement.

Acknowledgement

Acknowledgement, if any, can be given only to the person who actually helped to find out problems and to achieve the objectives of the research.

References cited

This is a listing of published and pertinent literatures cited in the text by authors family name, usually letter by letter. Accepted papers must be cited as (In press) at the end of the citation. Unpublished data work or information should be noted parenthetically in the text, e.g., (K.L. Sharma, unpublished data) or (P. R. Ojha, personal communications). All literatures listed in this section must be mentioned in one or more places in the text. References cited must be placed immediately after the text on a new page with continued pagination. Do not use *et. al.* and anonymous. If no authority is known, credit the work to the publisher. If there is an editor or editors, their names should be followed by (ed or eds). One-word publication titles (Hilgardia, Euphytica, Ecoprint, etc) should be spelt out while publication titles of 2 words or more are abbreviated. Some examples of references citation are:

Journal: Joshi, S. R. and P. K. Jha. 1995. Biomass production in grasslands of the Royal Chitwan National Park, Nepal. *Ecoprint*, 2(1):40-45.

Book: Pandey, S. N. and B. K. Sinha. 1972. *Plant physiology*. 1986 ed. Vani Educational Books (U.P.), India.

Thesis: Shrestha, G. K. 1986. Relationship of boron to reproduction in hazelnuts. Ph.D. Thesis, Oregon State Univ., Corvallis, Oregon, USA.

Book Chapter: Jindal, K. K., D. R. Gautam and B. K. Karkara. 1993. Pollination and pollinizers in fruits, P. 463-480. In: K. L. Chadha and O. P. Pareek (eds). *Advances in Horticulture*. Malhotra Publishing House, New Delhi, India.

Bulletin: Rollins, H.A., F.S.Howlett, and E. H. Emmet. 1962. Factors affecting apple hardiness and methods of measuring resistance of tissue to low temperature injury. *Ohio Agr. Expt.Sta. Res. Bul.* 901.

Proc.paper: Kawano, K. 1995. Green revolution and cassava breeding, p. 335-367. *Proc. Fourth Regional Workshop on Cassava Breeding, Agronomy Research and Technology Transfer in Asia*, Trivandrum, India.

Abstract: Shrestha, G. K. and M. M. Thompson. 1985. Brown stain disorder in hazelnuts. *HortScience*, 20:861 (Abstr.).

B. HINTS FOR WRITING THE ARTICLE

Headings and titles

Headings and titles, if shorter than one typed line, must be centered. Usually headings in the text such as abstract, introduction, materials and methods, results and discussion, acknowledgments and references cited are written all in capitals and boldfaced but not terminated with a period. On a separate line sub-heads are boldfaced but only the first letter of the first word should be an upper case letter and not terminated with a period. Run-in-heads are underlined indented terminated with periods and the first letter is capitalized.

Writing a word properly

Please be careful while writing word(s) in the text that is intended for publication in journals. Because, some words exist as one word while others are two words. Besides, two words are used with a hyphen to indicate one meaning. These words are not capitalized unless they stand at the beginning of a sentence. Some examples are given below:

a. Always exist as one word. Budbreak, budline, bypass, bioassay, breakdown, darkroom, daylength, dieback, endpoint, groundwater, infrared, peatmoss, photocopy, polymaking, postharvest, photomicrograph, extracellular, foothill, seedcoat, sidedressing, turfgrass, wastewater, winterhardiness, etc.

b. Always exist as two words. Dry weight, far red, fresh weight, fruit set, petri dish, root zone, sweet potato, winter hardy, all right, amino acid, base line, cover slip, tap water, freezing point, etc.

c. Two words with hyphen. By-product, clear-cut, 4-H, half-life, one-half, deep-rooted, freeze-dried, micro-Kjeldahl, mid-May, anti-irritant, semi-independent, etc.

Abbreviations and symbols in the text

To reduce space and printing cost abbreviations and symbols can be used in the manuscript; this will not reduce the quality of paper and but maintains the reading speed. It is necessary to leave a space between the numerical value and the symbol used; e.g. 20 kg, 18 m, etc. A sentence should not begin with a symbol or abbreviation. The use of abbreviations in the titles of the papers is discouraged. Do not space letters in the uppercase abbreviations for chemicals (e.g. NAA), institutions (e.g. IAAS), government organizations (e.g. MOA), etc. Some common examples of abbreviations and symbols are categorized as below:

<i>Category</i>	<i>Word/unit</i>	<i>Abbrev/symbol</i>
<u>All cases:</u>	August	Aug.
	December	Dec.
	January	Jan.
	February	Feb.
	September	Sept.
	October	Oct.
	November	Nov.
	Coefficient of variation	cv
	Department	Dept. (except in by lines)
	Foliar generations	F1, F2
	Hydrogen-ion concentration	pH
	Parental generation	P1, P2

	Standard error of the mean of a sample Versus	SE vs.
<u>Second and subsequent uses:</u>	Analysis of variance Controlled atmosphere Electron microscopy Gas chromatography Gas-liquid chromatography High performance liquid chromatography Infrared Photosynthetically active radiation Scanning electron microscopy Tobacco mosaic virus Ultraviolet Wettable powder	ANOVA CA EM GC GLC HPLC IR PAR SEM TMV UV WP
<u>Only with numerals:</u>	Active ingredient Celcius, degree Centimeter gram hectare hour (unit) kilocaloric least significant difference Common logarithm Natural logarithm Malling Morton Metric ton Microgram milliliter nanometer page (s) parts per million percent revolutions per minute	a.i. °C cm g ha h Kcal LSD Log Ln MM MT ug ml nm p. ppm % rpm
<u>Table column heads only:</u>	average concentration diameter fresh weight height maximum minimum month number temperature week year	avg. concn. diam. fresh wt ht max min mo no. temp wk yr

Use of numerals

In most journals, numerals are used in the running texts, tables, and figures. However, there are certain rules usually acceptable for writing numerals in the manuscript; they are:

1. Use numerals whenever a number is followed by a standard unit of measurement. The measurements are usually abbreviated by a symbol. Leave a space between the numerical value and the symbol: 15 m, 10 g, 300 ml, etc.
2. In general, words are written for numerals less than 10 and numerals for larger numbers: five plants, nine households, 200 ppm, 30 birds.
3. Use numerals for the following information:
 - Dates - 10 Jan. 1995, 5 Feb. 1995, etc. (leave one space)
 - Pages - p.200, p.500, etc. (Leave no space)
 - Percentage - 21%, 55%, 100%, etc. (Leave no space)
 - Numerical designations -type 1,type 2,Table 1,Figure 1, etc.(Leave 1 space).
4. Numerals are not used at the beginning of a sentence. In unavoidable circumstances, words for numerals can be used. Ten plants died.

Concise writing

The art of writing a manuscript for journal(s) needs a special skill that can condense the elaborated phrases into a concise manner. Actually this improves the quality of a paper. Some examples are:

Wordy

bright green in color
during the time that
few in number
from the standpoint of
if conditions are such that
in all cases
in order to
it is often the case that
it would thus appear that
oval in shape
plants exhibited good growth
they are both alike
past history
weather condition
heavy in weight
at that point in time
in my opinion
in a few cases
not affected
on a daily basis
it was clear that

Concise

bright green
while
fewer
according to
if
always
in
often
apparently
oval
plants grew well
they are alike
history
weather
heavy
then
I think
rarely
unaffected
daily
clearly

Selection of words

While presenting facts or opinion in the running text certain word(s) are preferred to others meaning the same thing correctly; some examples are:

Preferable words

about

Not preferable to use

approximately, circa

now	at the present time
result	end result
horticulturist	horticulturalist
begin or start	initiate
before	prior to
after	subsequent to
end	terminate
use	utilize
cultivar	variety
whether	whether or not
Permit or allow	facilitate
person	individual
see	observe
buy	purchase
stop	cease
give	donate
go	proceed
total	overall
ask	enquire
help	assist
toward	towards

Abbreviations of journal titles

Journals are named in various titles. In reference citations, many names or words of the titles are usually abbreviated except one-word titles. Commonly accepted abbreviations of some words in the journal titles are noteworthy. If proper abbreviation is in doubt it is better to spell out full name of the journal or the word.

<u>Full word</u>	<u>Abbreviation</u>	<u>Full word</u>	<u>Abbreviation</u>
Advances	Adv.	Horticulture	Hort.
Agriculture	Agric.	International	Intl.
Annal(s)	Ann.	Journal	J.
Biological	Biol.	National	Natl.
Chemical	Chem.	Physiology	Physiol.
Communication	Commun.	Proceedings	Proc.
Ecological	Ecol.	Report(s)	Rpt.
Entomology	Ent.	Research	Res.
Experimental	Expt.	Review(s)	Rev.
Gazette	Gaz.	Science(s)	Sci.
Genetics	Genet.	Tropical	Trop.

ACKNOWLEDGEMENT

This article is based on guidelines for contributors of many journals and publications. *Experimental Agriculture*, Elsevier's *Agricultural Science* journals (esp. *Scientia Horticulturae*), *Hortscience*, *Journal of the American Society for Horticultural Science*, *Indian journal of Agriculture*, *Indian Journal of Horticulture*, etc. are some journals which receive due acknowledgement.

SEMI-LOOPER *PLUSIA ORICHALCEA* FABRICIUS: A THREAT TO CARROT SEED PRODUCTION PROGRAM IN THE WESTERN HILLS OF NEPAL

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Carrot (*Daucus carota* L.) is becoming popular in the farming community of the western hills of Nepal. Lumle Agricultural Research Centre (LARC) in its endeavour to identify seed production environment has identified the mid-hills (800-1200 m asl) area suitable for seed production of carrot cv. New Kuroda, where the average seed yield exceeded 1000 kg/ha (Gurung et al., 1995).

Encouraged by the results of experiments conducted during 1993 and 1994 farmers of Kholakhet village began a carrot (cv. New Kuroda) seed production programme under the initiative of a local 'Seed Production Committee', and technical supervision of LARC. A total of 27 ropani (1.35 ha) of farm land was brought under the programme in 1994-95. The crop seeded in the third week of August were transplanted in the last week of Nov. 1994. All the recommended practices of carrot seed multiplication were followed.

Farmers noticed the appearance of semi-looper *Plusia orichalcea* fab. (Lepidoptera: Plusinae) in their carrot crop in the third week of April 1995. One field visit was made during the same week. The pest outbreak was in an epidemic form, resulting in the complete defoliation of the plants. The pest population was so high that a single umbel was attacked by more than 20 larvae in some cases, and a single plant by more than 100 larvae. Floral stalks in the umbel were cut giving a 'brush' like appearance. In more severe cases, the main stalks below the umbel were also attacked, leading to topping down of the inflorescence. The pest had also attacked other crops such as potato, cauliflower/cabbage, flowers of zucchini (*Cucurbita pepo*) and several weed species. Farmers of the village have 'never' seen such pest outbreaks in their lifetime in any crop. Of the 27 ropanies, about 7 ropanies of the crop was so severely damaged that farmers ploughed in the crop to plant other crops such as cucumber. In the rest of the field the farmers were advised to spray Ripcord (Cypermethrin 10 EC) at 1 ml/litre of water. The pesticide effectively controlled the pest.

Upon rearing of field collected larvae in Lumle laboratory, some association of the pest with a larval parasite belonging to Order Diptera (unidentified species) was observed. An outbreak of this pest was reported by Pradhanang *et al.*, (1990) from Gorkha District, where nuclear polyhydrosis virus were also observed causing pest mortality. There is need for further study on the pest dynamics, biology and management of this insect with due considerations to its natural enemies and biocontrol agents, in order to help the sustainable and long term survivability of the upcoming carrot seed production programme, and the cultivation of other vegetables, since the pest is polyphagous in nature.

REFERENCES CITED

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A NOTE ON THE RESPONSE OF GARLIC PLANTS TO EM SPRAYS

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Garlic is grown in Nepal for green vegetable, salad mixture and spice crop. It is also used in soup. Garlic carries medicinal properties to be used in variety of human disease, including cancer and gastrointestinal problems. In Nepal, especially in Kathmandu valley it is planted in September and continues its planting till November. The early planted garlicks are used for greens while the late planted ones for dry bulbs/cloves.

While observing garlic plants grown in Thimi area of Bhaktapur district from 1992 onwards it is seen that leaf tips start drying early at their growth stage reducing plant productivity and market yield of garlic greens. But, the problem was not associated with pests and diseases. This indicates that the symptoms may be related to soil degradation, water stress, nutrient imbalance, etc. Literatures on EM (effective micro-organisms) technology indicate that EM is beneficial to increase production and quality of a variety of agronomical and horticultural crops. Thus, it is assumed that EM solution would affect garlic production by increasing its yield parameters.

Table 1. Differences on various plant parameters between EM sprayed and unsprayed plants of garlicks, 1997.

<u>Plant Characters</u>		<u>- EM</u>	<u>+ EM</u>	<u>Difference, %</u>
Plant height, cm	(6)	54.3	62.9	15.8
Leaf length, cm	(6)	27.3	34.8	27.9
Leaf number,	(6)	5.0	5.7	14.0
Girth of plant, cm	(6)	0.7	0.9	28.5
Weight at green stage, g/plant	(2)	15.9	23.1	45.3
Weight at bulb maturity, g/plant	(4)	23.9	32.9	37.6
Bulb size, cm	(4)	2.8	3.2	14.3
Bulb weight, g/bulb	(4)	16.6	24.6	48.2
Cloves, #/bulb	(4)	10.3	12.4	20.3

Note: Figures in parenthesis indicate the number of farmers from which respective data were pooled.

Freshly prepared EM mixture (1 ml EM stock solution and 2g sugar in 1 liter of water) was sprayed on garlic plots of 6 farmers weekly from the 3rd week of Jan. to March (for greens) and to April (for bulbs), 1997. One hundred plants each from the EM sprayed and unsprayed plots of each farmer were taken for data recording on yield parameters before EM treatments and then at harvest (separately for greens and bulbs maturity stages). The crop was harvested for greens by two farmers during Mar 7 to 18, and for matured bulbs by four farmers during May 5 to 17, 1997.

When EM was sprayed on garlic plants for several times, they showed good response over unsprayed ones (Table 1). The increases in green weight and bulb weight per plant were over 45 percent. While plant height, leaf length, leaf number, plant girth, plant weight and bulb maturity, bulb size and clove number per bulb were increased considerably. But, on the average, the leaf-tip drying did not appear to be reduced by EM sprays. However, in plots of one farmer named MOTI the tip drying was reduced by 51% when EM was sprayed. Compared to the plants of other farmers, MOTI had the youngest plants when EM was used. The girth of plants and bulb yields were maximum in his plots (Shrestha, 1997). This indicates that EM applied at earlier stages of garlic growth could give better response to EM treatment. This study reveals that EM application seems to have beneficial effects on the growth and yield parameters of garlic although variability is observed among the farmers. Further studies are needed to confirm the results of this study.

REFERENCE CITED

- Shrestha, G. K. 1997. An effectiveness of EM solution on garlic production in farmers' fields. Research report submitted to the Community Welfare and Development Services (CWDS), Balaju, Kathmandu, Nepal. pp. 12.