POLICY PAPER

34

Guidelines for

Improving the quality of Indian Journals and Professional Societies in Agriculture and Allied Sciences

NAAS

NATIONAL ACADEMY OF AGRICULTURAL SCIENCES, NEW DELHI

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Guidelines for

Improving the Quality of Indian Journals and Professional Societies in Agriculture and Allied Sciences

PREAMBLE

The publication of journals provides an easy window for widespread sharing and access to the scientific knowledge and new discoveries. It serves as the main gateway for rapid reach to the correct and well-edited version of scientific investigations, research output and conclusions drawn. However, there is considerable variation in the scientific quality depending on accuracy, originality and manner of presentation of such information in different journals published by different scientific professional societies in the country. This leads to varying credibility/ reliability/ acceptability of the scientific knowledge communicated through various journals. It is in this context, that a brainstorming session on **Improving the Quality of Indian Journals in Agricultural Research, Education and Development** was organized on September 12-13, 2005 at NAAS office by bringing together a group of about 40 selected experts comprising distinguished fellows of the Academy and Presidents/Editors of Delhi based professional societies publishing leading journals in agricultural sciences, in a panel discussion mode. The discussions covered various topics such as research contents of the articles submitted, editorial board – its constitution and functioning, peer review of the articles, publication process, functioning of scientific societies, financial incentives and resource mobilization.

Dr. Mangala Rai, Secretary DARE & DG, ICAR, in his inaugural address, expressed concern over the generally low impact factor of our research journals and emphasized the need of having competent peer reviewers and professional editors for improving the quality and impact factor of atleast one scientific journal, in each of agricultural disciplines. In this connection he also stressed the need to improve the quality of research. The infrastructure created and funding enhanced for research programmes through NATP earlier and NAIP now under ICAR are likely to provide the needed impetus for quality research. The deliberations in the various sessions culminated in the following recommendations as guidelines for improving the quality of Indian journals and professional societies in agriculture and allied sciences:

RECOMMENDATIONS

1. Quality of Journal

1.1 Editorial Board – its constitution and functioning

Since the Editorial Board plays a key role in processing the articles, its proper constitution and functioning become main determinants in the scientific quality, contents and relevance of the journal.

1.1.1 Constitution

- The editorial job being extremely scientific, the choice of editors can not be decided upon by a majority election. Hence, the **Editorial Board should be constituted by nomination** by the Executive Council.

- There should be some sort of pragmatic mechanism to constitute the Editorial Board. One of the mechanisms suggested was that each member of the Executive Council should suggest 10-15 peer scientists in his / her area of specialistation. After thorough scrutiny of the proposed names, the Executive Council should select at least one name for each major sub-theme area.

- There should be a broad uniformity in the constitution of the Editorial Board of all the Indian journals in agriculture and allied sciences to the extent possible.

- Editorial Board should consist of one Chief Editor/Editor possessing distinguished broad expertise of the entire focused theme of the journal and a minimum of 5 members of proven competence representing different sub-theme areas, and should have a tenure of two to three years as per constitution. The Chief Editor/Editor should not necessarily be confined to the location where the society's head office is housed. In order to enhance the visibility, the Editorial Board may also include one or more reputed foreign scientists.

- Chief Editor/Editor should be a member of the Executive Council.

1.1.2 Functioning

- The Editorial Board should develop precise and comprehensive instructions for preparation of manuscripts of articles by the authors. These instructions should be published in an issue (volume) of the concerned journal preferably once in a year. However, if the instructions are modified/changed earlier, the modified version should be published immediately in the next ensuing issue (volume). The instructions should

elaborate specific criteria indicating which article can be accepted as full-length and which as short communication.

- The Chief Editor on receipt of an article will process it for peer review. For this purpose, the Editorial Board should also develop guidelines for the peer reviewers to enable them to undertake the objective and detailed review of the articles and also to offer clear-cut recommendations regarding their suitability or otherwise. The articles with contents of routine/repetitive nature should be discouraged, and scientific merit of contents should be the chief criterion to be taken into account while evaluating the article.

- The Editorial Board should meet preferably before publication of each issue. However, if for some reasons, it is not possible, the board's meeting must be held at least once a year.

1.2 Peer Review Process

- A list of about 8-10 peer reviewers in each sub-theme areas be prepared by the Editorial Board and Executive Council of the society. The selection of reviewers should be based on their own record of high level scientific publications in journals of repute. **The members suggested the desirability of including some Fellows of NAAS among the list of peer reviewers**.

- Chief Editor/Editor in consultation with the concerned Editor/Board Members should first himself judge the suitability of the article for consideration to be published in the journal, and then only the choice of appropriate reviewer(s) needs to be made.

- At least two peer reviewers should be involved for vetting each article. It was felt that while sending the article to the reviewers, the identity/affiliation of the authors need not be kept secret.

- In view of a general complaint of delays on the part of the reviewers, it was recommended that the commitment of the reviewer(s) should be sought first before the article is sent to him or her for review. The Board should also have an alternative reviewer identified beforehand.

- The society should cover all cost of stationery and postage in communication of the articles and not the reviewers/editors. Since, the cost involved is generally small, it would

be better if self-stamped envelopes are sent to the reviewers/editors. **Use of electronic media in the entire publication process will reduce the cost drastically, beside accelerating the pace of process**. This was strongly recommended.

- Societies should provide the comprehensive list of the actual reviewers at the end of the last issue of each volume, irrespective of the fact whether they rejected or accepted the articles.

- The reviewers should not be over burdened with number of articles. It was suggested to put a limit of maximum two articles per volume for any reviewer.

1.3 Quality of contents

- **The declining quality of journals reflects the falling standard of research in our institutions. The poor research planning and fast declining research support were considered as the main causes of declining quality of research in the country. This needs serious thinking and remedial action plan. The participants called upon the ICAR to initiate this process to stop further decay of science in the country.**

- A good journal should carefully apportion its space between the basic, strategic and applied research articles. Care should especially be taken in selecting the articles in the applied areas. The article must carry some new message viz. new techniques, methodology or process description, etc.

- Short Communication is a kind of "Hot Scientific News" related to new techniques, methods or a product. **Only the articles received as "short communication" should be considered for publication in this category**. Most often a full-length article when found unsuitable is recommended for publication as a short communication. This practice needs to be stopped.

- Inordinate long delay in publication is one of the reasons for scientists not to submit their articles in the Indian journals. The society should take all possible measures to ensure completion of the peer review process within a period of maximum three months.

- **The society should consider publishing a few relatively high quality articles with novel findings out of turn, on priority**. This will act as an incentive to attract good quality articles.

- Sometimes even a good piece of work is rejected due to poor language and presentation. The Editorial Board should help in rewriting and, if needed, even reanalysing the data on behalf of the author(s). This is a common practice being followed by some foreign journals. This practice will help accommodating such deficient authors, but good researchers.

- The journal should represent today's science, and not just any report or repetition of the research work done earlier / elsewhere in or outside the country. Quality of science-originality, strategic nature and relevance of work-should be emphasized. The Journal *Current Science* can be taken as an example.

- Review of the on-going scientific research in the country should be one of the important roles of the society. To meet this goal, the journal should include one good review article in each of its volumes which should be the "state-of-art report on scientific research".

- Almost every university publishes its own journal that includes articles based on the work done mostly within the university. However, there is wide variation in the scientific quality of the journals. Many journals are of low standard and lack in rigorous peer review and editing. The members suggested that such journals should be renamed as "Research Bulletins" rather than research journals. Nevertheless, the university may give due recognition to publications in these bulletins while evaluating the performance of scientists / faculty members for promotions or any such incentives.

- The universities which are maintaining high scientific standard of their accredited journals, should be provided necessary financial support by ICAR to further enhance the quality.

- ICAR also publishes a few multi-disciplinary journals. There is a need to upgrade the scientific quality of these journals, so that these journals serve as model to be followed by the professional societies.

- **The societies/journals need to be accredited by the ICAR through a credible agency like NAAS to set the standard. The accredition needs to done regularly on the basis of discrete quantitative criteria at certain intervals. The ICAR should provide the resources and such support needed for the accreditation work. The members felt that the ICAR may also consider whether the articles published in**

non-accredited journals should be considered as valid publications for performance assessment.

- **It should be made mandatory that only the accredited journals/societies will be provided financial support by the ICAR**. This will be a genuine discouragement to the ever proliferating and poor quality journals being published both in public and private sectors.

1.4 Publication process

- After an article is finally approved by the Chief Editor/Editor, he/she will put down the date of acceptance on the manuscript and will inform the concerned/corresponding author(s) regarding its acceptance for publication. He will also inform the concerned corresponding author(s) about rejection of the article as soon as the same is finally disapproved.

- Each article when finally accepted, should be thoroughly and meticulously edited by a well-known professional for correcting all errors, grammatic mistakes etc., for improving the flow, readability and coherence of language, for indicating the size and legibility of tables, figures and charts as well as their proper placement, and for specifying which word(s) and sub-heads should be bold/italics etc. On the whole, editing should ensure uniformity of the style as also overall excellent get-up of the journal.

- The Chief Editor/Editor will arrange the accepted full-length articles sub-theme wise and priority wise for publication in the issue (volume) of the journal. These will be followed by articles of short communication nature. The material will be passed on to the Secretary of the Society for publication in double columns in a reasonably good quality A-4 size paper.

- Periodicity, timeliness of publication, and regularity of journals are extremely important. The publication should not be delayed beyond two months. At least two issues of a volume of the journal should be brought out each year.

- Generally, every society at the time of its seminar / symposium / conference / convention publishes the abstracts of the articles received as a separate volume. The members felt that the society should publish "Extended Summaries" instead of abstracts. In this way, the interest of those members whose articles are generally not published in the journals is also served.

2. Improving Functioning of Societies

- Proper functioning of the society is crucial for ensuring the quality and punctuality of the journal published by it, which in turn depends on the persons chosen to fill the positions in the Executive Council (EC). The EC should consist of persons of eminence whose contributions in the discipline are well known. Therefore, the constitution of EC should go by the strength of science and not merely by democracy. **It was suggested that a search committee can be authorized to pick up names, a few of them could, for example, be fellows of reputed academies like NAAS, INSA, etc., which could be then ratified by the general body**.

- It was strongly felt that the Secretary and the Chief editor/Editor should work independently.

- The Constitution of the society is a determining factor for meeting its goals, functions, growth, and future development. Society should, therefore, take the help of professionals to draft its constitution. The copy of the constitution should be made available to all the members for ensuring transparency and implementation of the same in letter and spirit. The constitution should regularly be revised and updated based on society's own experiences as well as the lessons learnt from other societies in the country.

- The society should be well organized having its office furnished with modern communications and other facilities. Help of management expertise could be sought to organize and develop office procedures to make it more efficient. As an incentive, the ICAR should constitute an award to the best functioning society.

- Use of computers and electronic media for communication should be practiced. The time has come for each society to have its own web-site, which will help bringing the members of the society closer. The web-site will include, among other details, the database of the membership including the details of addresses, status, designations, subject-interest, etc. The web-site will be upgraded on regular basis, so that the members remain abreast of all the forthcoming activities and new developments.

- Traditionally, society is a forum for members to come together and exchange information, present their work, etc. Therefore, the society should be pro-active in promoting modern/advanced sciences by keeping the scientists updated with latest advancements in scientific research and modernization of teaching.

- Although, a journal is an official organ of a society to disseminate its quality, content and extent of reach in the subject, yet it should not be the only focus/target of the society. To be visible, the society should organize regular national and or international activities, and be in communication with its members. The role of societies should, therefore, include some of the following activities.

  a) Improving teaching in the respective disciplines should be one of the responsibilities of the societies, which will help upgrade the science itself, and its practice. Hence, modernization of course curricula should be one of the major activities. Since the societies have a wide membership of qualified people, they can organize such activities quite objectively.

  b) Societies should also review the status of scientific research going on in the country from time to time and should come out with reviews that can be shared among its members for their use and critical appraisal. The review articles should be well structured and invited by the Executive Council on a topical subject.

  c) **Training programs for young scientists particularly with regard to scientific writing and research proposal formulation, planning, conduct of result analysis would go a long way in raising the standard of science and published literature. The society can organize these trainings by utilizing the services of the expert members who come to participate in the annual general body meetings, seminars, symposia and conferences etc. NAAS would be in a better position to organize such training programmes. It will be desirable if ICAR could support such long-term HRD initiative.**

  d) The society should encourage the scientists of repute to write standard books. The authors should first get the synopsis of the proposed book(s) vetted by the peers in the discipline. The society should provide the required logistics including even seed money to carry out this project. The final format of the contents should have approval of the concerned society.

  e) In recognition of the outstanding contributions made in research/teaching, the society should offer fellowship to the distinguished members on a regular interval, who are selected based on a set of transparent criteria developed by the society and not on any *ad hoc* basis, and without any age discrimination.

f) Organizing at least one international seminar / symposium / conference once in six years would be a very stimulating and scientifically rewarding activity to keep the science of the disciplines vibrant and shared among its members. The society should also organize a national level seminar once in two to three years. This will keep the society scientifically functional and active.

g) Outcome of the society's symposia and conferences often does not meet the purpose, particularly due to delayed publication and poor circulation. The proceedings and recommendations should be published preferably by the well known professional publishers which can go a long way in reaching the clientele for whose benefit the symposia/conferences are organized. The proceedings must be published within a year and not later.

h) Society should project itself as the final word on the subject to the policy making bodies of the country. Brainstorming on issues critical to national interests needs to be organized form time to time, and policy papers published and distributed to the users.

i) Incentives need to be given by awarding not only its own members, but also the non-member scientists. These incentives should be the recognitions based mainly on the contributions in the discipline / sub-discipline.

j) Prompt response to the queries of the members is essential. Therefore, the society secretariat should remain up-to-date in information and quick in response.

- The minutes of all society meetings including General Body should be faithfully recorded and the proceedings circulated in time giving opportunity to each member to respond, if necessary.

3. Financial Incentive and Resource Mobilization

Quality of journals is very much related with the financial health of the societies. The financial position of majority of our societies is far from satisfactory. The following measures were suggested to remedy this malady:

- Publication of journal is the single most important economic activity of any society. Hence, the ever increasing cost of publication is a major concern for the society. It was suggested that the societies should explore the possibility of contracting well known private commercial publishers from within and outside the country to manage

publication as well as distribution of journals, while keeping the invite for articles, their reviewing and editing to themselves.

- The practice of providing free copies of the journals to the society's life members needs a relook. It involves not only the publication cost of the free copies, but also a large amount that is needed for meeting the postage and stationery charges. Members felt that some suitable criteria should be evolved to minimize these costs. One of the suggestions put forward was to stop posting free copies to the life members after 10 years of his or her retirement. Consensus of the members on this issue may be obtained for its smooth implementation.

- It was strongly felt that each professional society should develop a corpus fund and the ICAR should contribute one-time grant towards the corpus of each accredited society, beside enhancing the annual financial assistance for publication of journal which is quite low presently.

- The society should look for mobilizing its resources also through non-conventional sources i.e. private companies and organizations having similar interest. Like IIT's, **the societies should also approach its distinguished alumni world over to donate to their corpus fund**.

- The experience shows that to deliver 1000 copies of a journal, each of 100 pages, there should at least be 700 paid subscribers. A 10% outside paid subscription will be desirable to further ease the situation. Therefore, the societies should consistently work towards increasing the paid subscription.

- Currently there appear to be about 100 agricultural research journals being published in the country, as per the ICAR records. The members strongly felt that all attempts should be made to reduce this to a reasonable number by amalgamating/combining journals of similar scope and mandates. Although it will not be an easy job, but ICAR can play a positive role in this direction by organizing dialogue with the societies.

4. General Recommendations

- **Accreditation of the society/ journal should be made mandatory to grant recognition**. The funding of the society by ICAR should be linked to this. The ICAR may also consider giving higher weightage to the articles published in the accredited journals for purpose of scientist's assessment. The ICAR should identify a suitable nodal

agency to perform the accreditation work based on well-defined quantitative criteria on a regular basis. **The NAAS was thought to be the most ideal agency for doing this job**.

- **Need for hiring a professional editor and paid by each society was highly emphasized**. In this context it was suggested that the ICAR should be approached for providing financial support to implement this recommendation.

- Members recognized the potential of electronic media for publication of journals, such as on-line submission and processing of articles as well as on-line distribution of journals to foreign members, and also for the day-to-day management of the society's functioning. It will both hasten the process and reduce the society expenses drastically. It was, therefore, suggested that the **ICAR should provide one-time grant to the accredited societies to install the IT facilities on a priority basis**.

- While it was appreciated that considerable home work was done by NAAS in assigning impact factor to different research journals, members did point out some of lacunae in the existing practice. **A consensus decision was taken to organize another round of discussions and have a relook on the whole issue including development of quantifiable precise parameters, as it affects not only the societies, but also the scientists who publish articles in these journals**.

- In some fields, there are more than one journal with more or less similar scope and objectives. **The ICAR should start a dialogue to discuss possibility of merging such journals into one good journal. Financial support to such journals should then be enhanced**.

- Periodical review (say every five years) of the quality of journals and functioning of societies be organized by NAAS with financial assistance of ICAR. Attempts should also be made to remedy the deficiencies wherever existing, with the chief aim to motivate and strengthen the scientific competence of such societies.

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NAAS Documents on Policy Issues*

1.	Agricultural Scientist's Perceptions on National Water Policy	- 1995
2.	Fertilizer Policy Issues (2000-2025)	- 1997
3.	Harnessing and Management of Water Resources for Enhancing Agricultural Production in the Eastern Region	- 1998
4.	Conservation, Management and use of Agro-biodiversity	- 1998
5.	Sustainable Agricultural Export	- 1999
6.	Reorienting Land Grant System of Agricultural Education in India	- 1999
7.	Diversification of Agriculture for Human Nutrition	- 2001
8.	Sustainable Fisheries and Aquaculture for Nutritional Security	- 2001
9.	Strategies for Agricultural Research in the North-East	- 2001
10.	Globalization of Agriculture: R & D in India	- 2001
11.	Empowerment of Women in Agriculture	- 2001
12.	Sanitary and Phytosanitary Agreement of the World Trade Organization – Advantage India	- 2001
13.	Hi-Tech Horticulture in India	- 2001
14.	Conservation and Management of Genetic Resources of Livestock	- 2001
15.	Prioritization of Agricultural Research	- 2001
16.	Agriculture-Industry Interface: Value Added Farm Products	- 2002
17.	Scientists' Views on Good Governance of An Agricultural Research Organization	- 2002
18.	Agricultural Policy: Redesigning R & D to Achieve It's Objectives	- 2002
19.	Intellectual Property Rights in Agriculture	- 2003
20.	Dichotomy Between Grain Surplus and Widespread Endemic Hunger	- 2003
21.	Priorities of Research and Human Resource Development in Fisheries Biotechnology	- 2003
22.	Seaweed Cultivation and Utilization	- 2003
23.	Export Potential of Dairy Products	- 2003
24.	Biosafety of Transgenic Rice	- 2003
25.	Stakeholders' Perceptions On Employment Oriented Agricultural Education	- 2004
26.	Peri-Urban Vegetable Cultivation in the NCR Delhi	- 2004
27.	Disaster Management in Agriculture	- 2004
28.	Impact of Inter River Basin Linkages on Fisheries	- 2004
29.	Transgenic Crops and Biosafety Issues Related to Their Commercialization In India	- 2004
30.	Organic Farming: Approaches and Possibilities in the Context of Indian Agriculture	- 2005
31.	Redefining Agricultural Education and Extension System in Changed Scenario	- 2005
32.	Emerging Issues in Water Management – The Question of Ownership	- 2005
33.	Policy Options for Efficient Nitrogen Use	- 2005

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