



Ingeniería Agrícola y Biosistemas

Coordinación de Revistas Institucionales: Oficina 114, Edificio Dr. Efraím Hernández X. Dirección General de Investigación y Posgrado,

Universidad Autónoma Chapingo, Carretera México-Texcoco km 38.5. Chapingo, México, C. P. 56230. MÉXICO

Editor-in-Chief: Dr. Efrén Fitz-Rodríguez
email: inagbi@taurus.chapingo.mx
52 + (595) 952 15 00 Ext. 1569

Guide for authors

Description

Ingeniería Agrícola y Biosistemas (Agricultural and Biosystems Engineering; INAGBI) is a bilingual (Spanish and English) scientific journal published by the Universidad Autónoma Chapingo on a biannual basis. It offers professionals in agricultural and biosystems engineering a means of disseminating and discussing the results of unpublished research. In this sense, the journal's aim is to disseminate the results of scientific research and technological developments related to biological systems and agricultural engineering.

Topics

Biosystems and bioprocesses:

- Agricultural biosystems (greenhouses, growth chambers, vertical agriculture, green factories, controlled environment agriculture)
- Bioengineering
- Biosensors
- Biosystem and process modeling
- Mathematics for agriculture
- Prediction of agricultural production
- Simulation and optimization techniques
- Validation methodologies

Agro-food science and technology:

- Analysis and design of agro-food processes
- Automation and optimization of production facilities
- Quality control, ripening and senescence
- Development of agro-food products
- Packaging, packing and sorting systems
- Sensory evaluation
- Fermentations
- Drying, processing and storage of fruits and vegetables
- Meat, dairy, cereal and oilseed products
- Properties of biomaterials
- Physical, chemical and physicochemical properties of food and related products

- Post-harvest sensors
- Food safety
- Logistics systems
- Pre- and post-harvest technologies
- Prebiotics and probiotics
- Functional and innovative foods

Mechanization, automation and instrumentation:

- Automatic process control
- Soil dynamics (during tillage, traction and compaction)
- Equipment for agriculture, agribusiness and forestry
- Hydraulics, turbomachines and irrigation systems
- Equipment for the handling and processing of livestock products
- Machinery for the establishment, protection and harvest of agricultural products
- Tractors and farm tools
- Machinery for livestock facilities
- Precision agriculture
- Geographic positioning/information systems
- Satellite, aerial and remote sensing image analysis
- Environmental control in biosystems
- Intelligent machines and systems
- Artificial vision
- Agricultural robotics

Environment and energy:

- Environmental impact of agricultural development
- Pollution control and environmental protection
- Soil properties and erosion control
- Agricultural waste treatment
- Wastewater treatment and use
- Soil remediation
- Erosion control
- Watershed and natural resource management
- Power generation facilities
- Bioenergetics
- Renewable energies (solar, wind, geothermal, among others)

Water use and management:

Agrometeorology

- Hydro-agricultural structures
- Irrigation, fertigation, and drainage
- Water resource management
- Transport and infiltration processes
- Water-soil-plant-atmosphere relations
- Crop water requirements

New trends:

- Omics
- Nanomaterials
- Nanotechnology
- Biomaterials
- Microbiomes
- Artificial Intelligence
- Massive Data
- Cloud Computing
- Internet of Things (IoT)
- Intelligent Technologies
- Machine Learning
- Data Analysis

Types of contributions

The types of contributions considered for publication are:

Scientific articles: They represent original and unpublished contributions, derived from a rigorous experimental process, in which a contribution to scientific knowledge is made. Their length must be no more than 5,000 words, excluding references.

Scientific or technological notes: These are short reports of original research. They have the same objective as the scientific article, but are presented in a short form. Their length must be no more than 3,000 words, excluding references.

Review articles: They must be studies based on an exhaustive and critical analysis of the state of the art, where it is possible to glimpse the current and future needs of research and, where appropriate, technology transfer of the chosen topic. Their length must be no more than 6,000 words, excluding references.

Authors interested in submitting a review article must be established researchers in the field. Prior to application, authors should send their CV (listing the contributions made on the topic) along with the summary of the proposed review document to the Editor-in-Chief (inagbi@taurus.chapingo.mx) for evaluation.

Before starting

Authors should consider the following points before starting the submission process for their contribution.

Code of ethics

For more information on the INAGBI journal's Code of Ethics, please go to the section on [Editorial Policy](#).

Originality: Authors must ensure that they have written completely original works; if they have used the work or phrases of other authors, they must be cited appropriately. Plagiarism can be presented in many ways, from self-plagiarism (citing one's own work without the respective reference) to presenting someone else's work as one's own, copying or paraphrasing substantial parts of another work (without attribution), and even claiming as one's own the results of research done by others. Plagiarism (in all its forms) and fraudulent statements constitute unethical conduct and are unacceptable in the scientific community and in the publishing process.

Multiple publication: Authors must not submit the same manuscript, or one that describes essentially the same research, to more than one journal. This publishing behavior is unethical and unacceptable.

Recognition of sources: Adequate recognition should always be given to the work of other authors. Information obtained in the course of confidential services, such as manuscript refereeing or grant applications, should not be used without the explicit written permission of the author of the work involved in these services.

Authorship of the contribution: Authorship must be limited to those who contributed significantly to the conception, design, execution, or interpretation of the research conducted. The corresponding author must ensure that all co-authors have reviewed and approved the text, from the first manuscript to the final version, and have accepted its submission for publication.

Declaration of interests

Authors must disclose any financial or personal relationships with other people or organizations that may inappropriately influence (bias) the outcome of the work. For this purpose, authors must indicate whether there was a conflict of interest in the **submission cover letter** and, if so, mention the agreements reached.

Use of inclusive language

Inclusive language recognizes diversity, is sensitive to differences and promotes equality. Articles should

not make assumptions about any reader's beliefs, and should not contain anything that could imply that one individual is superior to another on the basis of race, gender, culture or any other characteristic. Authors must ensure that the writing is bias-free.

Changes to authorship

Authors are expected to carefully review the name of each author and their order according to the contributions they made to the work before submitting their manuscript. Any requested change (addition, deletion or reordering) in the list of authors must be made before the manuscript has been accepted, and shall be submitted for consideration to the journal's Editor-in-Chief in a special document explicitly created for this purpose, signed by all authors involved indicating their agreement and the reasons for the changes. The e-mail address for the reception of any request is inagbi@taurus.chapingo.mx

Open access policies

The INAGBI journal, together with the Universidad Autónoma Chapingo, recognizes that, in order to improve the processes of diffusion and dissemination of scientific knowledge, it must be available to any user without any legal or economic barriers. Therefore, the authors who publish in this journal accept the following terms and conditions:

Based on copyright law, the INAGBI journal recognizes and respects the moral rights of authors, as well as ownership of the economic rights of their work that will be transferred to the Universidad Autónoma Chapingo for open access dissemination.

In this way, every author who publishes in INAGBI must have signed a **letter of transfer of rights** in which it is explicitly recognized that the dissemination of his or her work will be done under the principles of open access and that, in addition, other independent and additional contractual agreements can be made for the non-exclusive distribution of the final version of the published article (such as including it in an institutional or thematic repository, hosting it in an academic social network, and disseminating it on some other electronic or printed platform). The foregoing is on the condition of clearly and explicitly stating that the document was first published in the INAGBI journal, placing the reference in accordance with what was proposed on the first page of the article and placing the respective digital object identifier (DOI).

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Procedure for submitting manuscripts

We suggest consulting the letter, front page and manuscript formats, as well as the initial format review criteria in the support material section (<https://revistas.chapingo.mx/inagbi/en/index.php?seccion=material>), before submitting a contribution.

Submission

Contributions will only be received through the Editorial Manager® (<http://www.editorialmanager.com/inagbi/>). Follow-up to the peer review, including the decision of the Editor-in-Chief, will be done through said manager and communication will be maintained exclusively with the corresponding author. Tutorials for the use of the system can be found on the journal page. If you have any questions or problems with the manager, please contact us through the following email address: inagbi@taurus.chapingo.mx; if possible, please indicate in the email a phone number where we can contact you if necessary.

The documents that must be uploaded separately in Editorial Manager® for submission of the manuscript are:

Submission cover letter. It should include the title of the contribution, as well as the name, affiliation, address, telephone number, e-mail and signature of the corresponding author. In this letter, the authors expressly declare that the contribution is the product of original research, that the results presented are unpublished, that the contribution is not being simultaneously submitted to another publication medium, and that it has not been previously published in another medium or language. Within this letter, the authors must indicate if there was a conflict of interest and, if so, mention the agreements they reached.

A contribution will be considered as "previously published" when it has been disseminated in congress proceedings, or reports of any other event, and has an ISSN or ISBN.

Front page. This is the author identification page and must contain the title of the contribution, as well as the name, ORCID, affiliation and contact information of all authors.

Manuscript. It must be attached in Microsoft Word® format and contain all the sections marked in this guide according to the type of contribution. In order to ensure that the review is double-blind, this file cannot include the name or affiliation of the authors.

Figures. To ensure that the quality of the figures is not lost, they must be presented separately in TIFF or JPG format with a minimum size of 945 x 945 pixels, and a minimum resolution of 300 pixels per inch (300 ppi).

Additionally, make sure you have the full name, email address and place of affiliation of at least three potential referees who have experience in the subject matter of the contribution.

Notice of receipt of contribution

Upon receipt of the submission application, it will be verified that the paper presents a subject in accordance with the journal's aims, and that it meets the requirements described in this author's guide and those pertaining to the degree of duplicate content, determined through a similarity detection service, for example: iThenticate®. If it meets the requirements, a notification of receipt of the contribution will be issued; in it, a referral code will be assigned, which must be specified in any procedure or consultation. Failure to comply with the criteria described in the author's guide will lead to the return of the manuscript for correction before the peer review. Comments on the manuscript will be sent via e-mail.

Peer review

Once the contribution is accepted in the initial review and the referral code is assigned, the Editor-in-Chief will assign an Associate Editor (specialist in the subject), who will in turn invite two Referees, who will be expert peers in the subject for the evaluation of the manuscript. This process is a double-blind review.

At the end of the manuscript review process, the opinion of the Referees can be: accepted, minor revision, major revision and rejection. In accordance with the observations made by the Referees and his or her own observations, the Associate Editor will issue a single opinion, which the Editor-in-Chief will consider in order to send a response to the authors.

Accepted: This implies that the manuscript will be published as submitted.

Minor revision: This decision is related to grammatical, technical and formatting deficiencies.

Major review: Under this criterion there are suggestions for changes in the methodological design, presentation

of results, clarification of techniques or experiments, or inclusion of data that give scientific validity to the results and conclusions of the contribution.

Rejected: This opinion indicates that the contribution cannot be considered for publication in the manner in which it was submitted.

In every case, the Referees and the Associate Editor will include the arguments of their opinion.

If the manuscript was ruled as a minor revision or major revision, it can be accepted after attending to the corrections suggested by the referees. Once the author has made the proposed changes, the new version of the manuscript should be uploaded into the system, along with the response to each observation, so that it can be sent to the corresponding Associate Editor for a second review. This is done until the contribution is accepted or rejected.

Authors whose contribution has been accepted for publication in INAGBI must send a **letter of transfer of rights** prior to the publication process. This process consists of editing and style correction, translation and layout. At each stage the authors receive an email for their approval.

Transfer of rights

In the event that the contribution is accepted for publication in the INAGBI journal, and in accordance with the open access and ethics monitoring policies, the **letter of transfer of economic rights** of the contribution will be required, which must contain the signature of all authors.

Structure of contributions

We suggest downloading the manuscript template located in the support material section (<https://revistas.chapingo.mx/inagbi/en/index.php?seccion=material>), for use in writing and submitting the contribution.

Front page

The name of the authors must be written after the title and aligned to the left, each on a different line. They should not mention academic degrees or titles. The name should begin with the first name(s), followed by the last name(s), which if two should be joined by a hyphen without spaces. After each author's name, his/her ORCID (<http://orcid.org/>) should appear in parentheses.

In the case of authors with a different affiliation, a superscript number at the end of each name will identify their data. After the names, the full affiliation and address will be written.

The corresponding author will be identified by the sign * and the phrase "Corresponding author" followed by his/her e-mail address and a telephone number.

Manuscript

The manuscript must include the following sections, according to the type of contribution:

Scientific articles and Scientific or technological notes: They must include: title, abstract, keywords, highlights, introduction, materials and methods, results and discussion, conclusions and references.

Critical review articles: They must include: title, abstract, keywords, highlights, introduction, methodology and criteria used for the search and selection of references, critical analysis of the literature, discussion, conclusions and references.

Title

The title of the contribution must not exceed 15 words. The first letter of the title should be in uppercase and the rest in lowercase. If biological organisms that are not common are mentioned in the title, it must be written in accordance with the scientific standard that exists for such a case. If widely known species are mentioned, the scientific name should be included in the keywords and not in the title.

Abstract

It is a synthesis of the contribution with the most relevant aspects: introduction, objectives, methodology, results, study limitations, originality and conclusions, which should be presented separately. It should not include discussion, citations, table or figure references, and must not contain more than 250 words, in the case of scientific and critical review articles; in scientific or technological notes the limit is 150 words.

Keywords

It is a list of up to five simple or compound words, **not included in the title**, which serve to indicate to the reader the topics to which the contribution refers. They must be written immediately after the abstract, in lowercase, separated from each other by commas and with a period at the end of the list.

Highlights

They are short sentences that help increase the visibility of your article through search engines. They consist of a brief description of the most novel results of your research. Three to five ideas (maximum 85 characters, including spaces) should be submitted one line below the keywords.

Introduction

This section must contain the problems related to the object of study, as well as the "state of the art" of the subject in question, its importance, bibliographical background, objectives and working hypotheses; that is, the precise justification for addressing the problem to be analyzed must be given, avoiding general justifications. The objectives must clearly specify and delimit the purpose and scope of the study carried out. They should be presented at the end of this section, be the same as those stated in the abstract and be consistent with the conclusions.

Materials and methods

The most relevant and exclusive aspects of the work are described herein, allowing others to know how the research was carried out and, in turn, to replicate and corroborate the results. This section should include: research location(s) and dates, factors and levels under study, treatment design, experimental unit and design, variables evaluated together with their units and form of measurement, materials, equipment (brand, model, country) and techniques used, experiment management, and statistical analysis procedures and techniques. If methodologies are used whose description is extensive and which can be consulted in a manual or specialized publication, the corresponding citation should be referred to. Any modifications to these generalized methods must be declared and specified.

Results and discussion

This section should present the results obtained or observed facts arising from the application of the methodology in an orderly, complete and concise manner. Tables and figures (drawings, graphs, photographs, among others) may be presented and must be understood on their own without having to resort to text. Information presented in the tables and figures should not repeat what is mentioned in the text, and should be attached at the end of the paper; however, their place within the text must be indicated. Information corresponding to "Materials and Methods" should not be repeated, and the generation of literature review-type wording should be avoided.

It is necessary to consider the elements derived from the statistical analyses, for which reference should be made to the existence or not of statistical differences, as well as the measure of risk assumed by the researcher when making such statements. If appropriate and relevant, the interactions between factors under study must be interpreted coherently. In addition to measures of central tendency, dispersion measures such as the coefficient of variation or standard error should be included, when these are pertinent.

In this section, the results obtained are explained and discussed, as well as their relationship with the hypothesis and objectives, supported by comparing the results obtained with those reported in the scientific literature related to the subject. Each relevant result should be discussed. Avoid over-citing a single idea and discussing published literature.

Conclusions

They are the statements derived from the results and the discussion; they should not exceed the scope of the results and discussion, nor be a summary thereof. Care must be taken to ensure that the conclusions are fully consistent with the objectives set out at the beginning of the study. This section should only include facts proven in the study, so they should not contain hypotheses or speculation, nor should recommendations be made to guide future work.

Acknowledgments

This section will include recognition of individuals, institutions, funds, and research grants, among others, that have in some way significantly supported the development of the study.

References

All bibliographic references cited throughout the contribution must be presented in accordance with APA 7 standards (<http://www.apastyle.org>). A guide to their use is available on the journal's website (http://revistas.chapingo.mx/inagbi/archivos/guia_apa.pdf). Make sure that all references cited in the text are also present in the reference list (and vice versa). All references must include their DOI (Digital Object Identifier: www.doi.org) or, failing that, the email address where the original citation can be found. References to theses, brochures, abstracts and conference proceedings, or any other publication with limited circulation, are not allowed. Internet citations are not allowed either, unless they are related to statistics or yearbooks from official bodies.

If a reference management program is used, be sure to remove all field codes before submitting the manuscript.

1. In your Word file, press Ctrl + E, to select all content.
2. Press Ctrl + Shift + F9 or Cmd + 6 to unlink all fields and remove hidden links.

Format

Language

The journal *Ingeniería Agrícola y Biosistemas* receives contributions in Spanish or English.

General

The paper must be presented in Times New Roman 12-point font with 1.5-line spacing (including tables, figures and references), and 2.5-cm margins on all four sides. Each page must be numbered consecutively, as well as the lines on the left margin to facilitate the review work.

As far as possible, the length of sentences and paragraphs should be a maximum of three and ten lines, respectively; this will help in understanding the ideas to be conveyed.

Names

Common names of elements, substances, plants, animals and things should be written in lowercase. Proper names should be written in lowercase, with the exception of the initial(s). Product brands should not be used, but rather their generic or chemical name.

Chemical names (those in which the chemical structure of a substance is established) should be written in accordance with the nomenclature of the International Union of Pure and Applied Chemistry (IUPAC, <http://www.iupac.org/>); for example: 2,4-dichlorophenoxyacetic acid.

Scientific names must accompany, in brackets, the common names of plants and animals the first time they are mentioned; afterwards they can be omitted. They are written in italics and are made up of a generic epithet (genus), specific epithet (species) and surname(s) of the classifier(s). In addition, they should be written in lowercase, except for the initial letter of the genus, the surnames of the classifiers and the names of the cultivars that are attached to the scientific name; for example: *Persea americana* Mill.

Abbreviations

The first time an abbreviation is used in the document, the full meaning must be written out first, followed by the abbreviation in parentheses. On subsequent occasions, only the abbreviation should be used without further explanation. For example, "...compounds were identified using high performance liquid chromatography (HPLC)".

Equations and variables

Create the mathematical formulas with the Word equation editor (Insert -> Equation -> Insert new equation). All equations should be written aligned to the left, on a separate line, and numbered sequentially in the right margin.

The variables used in the manuscript should be fully defined (name, symbols and units) and as simple as possible. In order to help distinguish them from units, all variables and mathematical symbols must be written in italics. Within the text, avoid using the equation editor to insert symbols or variables (use the insert symbols tool, and format in italics).

The International System of Units should be used throughout the document. All units should be written in normal text and linearly; for example, for specific heat $\text{J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$ is used

Numbers

Arabic numerals should always be used when indicating units and measurements, and when designating numbers from 10 onwards. When numbers from zero to nine are mentioned, not associated with units, they should be written in letters; for example, "...there were seven treatments..." and "...the temperature of the refrigeration chamber was 7 °C...".

In quantities, a point should be used to separate the integer part from the decimals. For very large or very small values, prefixes or scientific notation should be used. Some examples are the following: "... 3.6 MPa were used...", "... with a permeability of $1.45 \times 10^{-14} \text{ kg}\cdot\text{m}\cdot\text{s}^{-1}\cdot\text{m}^{-2}\cdot\text{Pa}^{-1}$ and a thickness of 35 mm...", "...the load loss was calculated over 1.5 km with..." Additionally, the figures of the units must be separated by a space.

Tables

Before submitting a table, its title must be written (short and precise), starting with the word "Table", followed by the corresponding consecutive Arabic numeral according to its order of appearance in the text.

Tables should only have three main horizontal lines: above or at the beginning of the table, below the column heading, and below the table field. If it is required to separate another variable or statistics such as least significant difference or coefficient of variation, dashed line may be used. For no reason should vertical lines be inserted; their use is not allowed. Tables should be constructed in Word, without the use of tabs or lines made with the drawing tool.

Any clarification or abbreviation used in the table must be explained at the bottom of it, using superscripts at the end of the alphabet in reverse order (z, y, x, w,...). All tables must be understood on their own, without the need to resort to text. Indications of statistical significance, when applicable, must be made with lowercase letters from the beginning of the alphabet

(a, b, c, d,...). Likewise, a single asterisk (*) can be used for $P \leq 0.05$, double asterisk (**) for $P \leq 0.01$ or triple asterisk (***) for $P \leq 0.001$.

Note: Tables and equations must be submitted in editable format.

Figures

Figures must be sent in the TIFF or JPG image formats with a minimum size of 945 x 945 pixels, and minimum resolution of 300 pixels per inch (300 ppi). All figures must be grouped, without letters, symbols or lines placed with the drawing tool. If there is a need to do this, the image must be grouped as one or saved as an image at a minimum resolution of 300 ppi.

At the bottom of each figure, place a legend with the word "Figure", followed by the corresponding Arabic numeral, and a text containing the information necessary to understand it. Like the tables, it must be understood on its own, without the need to resort to text. The title of the figure must be included as text, and not be part of the figure. The points, lines or bars that represent averages in the body of the figure should be accompanied by their standard errors.

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Author queries

If you have any questions, we invite you to write to us at inagbi@taurus.chapingo.mx or consult our Frequently Asked Questions section.