1. AIMS AND SCOPE

The *Spanish Journal of Agricultural Research* (SJAR) is a quarterly international journal that accepts research articles, reviews and short communications of content related to agriculture. *Research articles* and *Short communications* must report original work not previously published in any language and not under consideration for publication elsewhere.

SJAR publishes papers that report research findings on the following topics: agricultural economics; agricultural engineering; agricultural environment and ecology; animal breeding, genetics and reproduction; animal health and welfare; animal production; plant breeding, genetics and genetic resources; plant physiology; plant production (field and horticultural crops); plant protection; soil science; and water management. SJAR is not publishing articles on “food science and technology”. Original research on genetic association studies must report variance estimates explained by those genetic variants/alleles in study. Articles on local research will only be publishable if they show methodological innovation or results that can be relevant to other areas.

*Short communications* should cover a concise study of wide interest, novelty and/or high quality. Papers must report relevant information, not preliminary findings.

*Reviews or minireviews* aim to provide an overview for an issue of great interest or topicality. They will be invited by the Editorial Board. However, potential authors can suggest topics to the Editor-in-Chief. Authors must have published some works earlier on the subject.

2. PEER REVIEW AND EDITING

Upon submission, the manuscript will be cursorily inspected in the editorial office for compliance with the author instructions. Manuscripts that do not achieve the prerequisites for publication (please refer to these guidelines) will be immediately rejected. Remaining manuscripts will be assigned to the corresponding Editor-in-Chief, which may reject or allocate them to one of the twelve Section Editors, depending on the topic. Section Editors maintain a global vision of their topic areas. They select Associate Editors, who are responsible for identifying relevant referees for single-blind peer review (the referees know the identity of the authors, but the authors do not know the identity of the referees).

Two referees are usually invited to comment on each submission. When the opinions of the referees differ significantly, the manuscript is usually sent to a third referee. When a decision has been reached, the decision is communicated to the author.

The editors' decision is final unless there is a proven error in the process of manuscript evaluation or peer review. If you believe that there has been a process error in the handling of your manuscript, please address your concerns to the Editor-in-Chief and include the manuscript submission number.

COPYEDITING. After the author has submitted the final version and this has been accepted for publication, the manuscript undergoes a copyediting process. The copyeditor performs the clean-up edit. This edit occasionally generates new queries, which are sent to the author. SJAR reserves the right to correct grammar, improve clarity, and impose the SJAR style. Authors are responsible for content, including the spelling of personal and place names. SJAR reserves the right to refuse publication of articles that, upon repeated resubmission, do not meet stylistic standards. When editing is complete, the issue is produced.

3. OPEN ACCESS

SJAR is an Open Access Journal. All articles are distributed under the terms of the *Creative Commons Attribution 4.0 International (CC BY 4.0) License*, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

There are no handling or page charges.
4. ETHIC RESPONSIBILITIES

Previously published material is not accepted. Authors are held responsible for obtaining permission for partial reproduction of materials (text, tables, or figures) included in other publications, and for accurately quoting their origin. Authorization must be requested from the owner of this material.

When reporting experiments on animals, authors must indicate which institutional and national guide for the care and use of laboratory animals has been followed.

Conflicts of interest: A conflict of interest exists when professional judgment concerning a primary interest (such as the validity of research) may be influenced by a secondary interest (such as financial gain). Financial relationships (such as employment, consultancies, stock ownership, honoraria, paid expert testimony) are the most easily identifiable conflicts of interest. However, conflicts can occur for other reasons, such as personal relationships, academic competition, and intellectual passion. SJAR expects authors to declare any commercial involvements that may represent a conflict of interest in connection with their articles.

Authorship. Following the International Committee of Medical Journal Editors recommendations (http://www.icmje.org), authorship must be based on the following four criteria:

i) Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

ii) Drafting the work or revising it critically for important intellectual content; AND

iii) Final approval of the version to be published; AND

iv) Agreement to be accountable for all aspects of the work by ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. Besides, authors should have confidence in the integrity of the contributions of their coauthors.

All those designated as authors should meet all four criteria for authorship, and all who meet the four criteria should be identified as authors. Those who do not meet all four criteria should be acknowledged.

It is the authors’ collective responsibility, not the journal to which the work is submitted, to determine that all people named as authors meet all four criteria.

The corresponding author is the one individual who takes primary responsibility for communication with the journal during the manuscript submission, peer review, and publication process. The corresponding author should be available throughout the submission and peer review process to answer to editorial queries in a timely way, and should be available after publication to respond to critiques of the work and cooperate with any requests from the journal for data or additional information should questions about the paper arise after publication.

5. SUBMISSION

Authors must submit manuscripts via the website of SJAR (http://www.inia.es/sjar). Authors may register on the site at any time, but they should register only once. During registration, authors choose a username and password. The security of manuscripts is protected by the username/password system. You may find instructions to upload a manuscript under the site SUBMITTING A MANUSCRIPT (JOURNAL HELP for authors). Please upload the entire manuscript, with tables and figures (on separate sheets but in the same document) and supplementary files, in Word format as a unique file. Separate figure files will be required later if the manuscript is accepted. A completed manuscript submission will be confirmed by e-mail.

Submission of a manuscript implies the following:

- the work described has not been published previously in any language (except in a book of abstracts, in the proceedings of a scientific meeting or as part of a thesis);
- the work is not under consideration for publication elsewhere;
• publication of the work has been approved by all co-authors;
• the authors agree to the automatic transfer of the copyright to the publisher if and when the manuscript is accepted for publication;
• the manuscript will not be published elsewhere in any language without the consent of the copyright holders; and written permission of the copyright holder has been obtained by the authors for materials from other copyrighted sources.

Two supplementary files should also be uploaded:

• COVER LETTER (mandatory): indicate the main aims of the manuscript, the type of paper (research paper, review paper, short communication), the novelty of the content, and convincing arguments of why SJAR should publish this paper.
• Provide a list of four potential expert reviewers with full contact information and e-mail addresses. These reviewers must not have a conflict of interest with the authors (e.g. personal relationship or work in the same institution) or the paper content, and the Editorial Board may decline to contact any of the reviewers suggested by the authors.

Before submitting, please check that:

• The manuscript was proofread by all the co-authors;
• The language was revised by a professional science editor or a native English speaking colleague if there is any doubt about the clarity of the language;
• The structure of the manuscript follows the guidelines of SJAR (line numbering, sections, reference presentation, etc.)
• Your cover letter provides a short view of the main results and potential application of your findings; it should be easy to understand by non-specialists;
• In case of resubmission, the reference of the initial submission is provided.

5.1. Revised manuscripts

Authors are required to submit their revised manuscripts accompanied by a letter containing a detailed (point-by-point) reply to the reviewers and editor’s comments. A revised manuscript will retain its original date of receipt only if it is received within two months of the date of return to the author. Revised papers returned after this interval will be treated as new submissions. Papers will not be accepted until all required minor changes have been incorporated into the document.

5.2. Manuscript preparation

Manuscripts should be written in Times New Roman 12-point font, with 1.5 line spacing. The four margins will be 2.5 cm. Section headings should be written 14-point font in bold print. All pages should be numbered consecutively, and line numbers should be printed on each page (starting with 1 on each page) to facilitate ease of reference for the reviewers. Each paragraph should begin with an indentation of 1-cm. Tables, figures and annexes must be included on separate sheets (but in the same Word document), one per page, following the References section. Use Word compatible software. Separate figure files will be required later if the manuscript is accepted.

Language: Manuscripts should be written in concise, legible English, which must be carefully reviewed by the authors for correctness of language and content. English spelling can be British or American, but it must be consistent throughout. Authors whose first language is not English are strongly advised to have their manuscripts checked by a proficient third party prior to submission.

Papers reporting sequence data. Manuscripts containing primary nucleotide sequence data must be accompanied by (an) accession number(s) from an internationally available nucleotide database.

Papers reporting software. Software should be available for a period of two years after publication of the manuscript.

Papers reporting field research. Field research should indicate replications in sites and years in connexion to the addressed aims of the experiment(s). In many cases, several years (a minimum of three in general) may be required to account for all variations in factors that affect plant growth and development, in particular for those researches dealing
with production and yield. Since the lack of this requirement can be cause of manuscript rejection during the preliminary inspection, if this recommendation is not fulfilled, arguments supporting the validity of the results must be stated and included in the letter addressed to the Editorial Office.

**Research articles** should not be longer than 28 pages (or 8,500 words), including front page, references, tables and figures, and excluding the supplementary material. Research articles should contain a front page, an abstract, up to seven keywords and the abbreviations used. The main text should have the following sections (see suggested layout below): introduction; material and methods; results; discussion (avoid combining the results and discussion sections); acknowledgments; references; tables and figures; and supplementary material, if any.

**Short communications** should be no longer than 10 pages (or 3,500 words), including front page, references, tables and figures, and excluding the supplementary material. Short communications should contain a front page, an abstract, up to seven keywords and the abbreviations used. The main text should include the following sections: introduction; material and methods; results and discussion combined sections; acknowledgments; a shortened list of references; up to three tables and figures; and supplementary material, if any. The manuscript title must start as "Short communication".

**Review or minireview articles** (typically invited by the Editor) do not have page limitation or maximum number of references. They should include a front page (the manuscript title must contain the word "Review"); an abstract; up to seven keywords; abbreviations used; a variable main text (the introduction should be based on general coverage of the issue, followed by a critical assessment of the most important references); acknowledgments; references; tables/figures (encouraged); and supplementary material, if any. Reviews will also be submitted to the peer-review process.

### 5.3. Layout

The following layout is strongly recommended:

#### 5.3.1. Front page

The first page must include the following:

- **Title of the work.** The title must be clear, short and concise. Avoid terms such as “Study of...”, “Observations...”, or “Contribution to...”. The title should preferably not exceed 20 words.
- **Authors’ names:** We recommend hyphenating in the case of more than one surname (e.g., Luisa M. Torres-Cerezo). When authors are associated with different institutions, each author should be marked with a superscript number indicating the corresponding author’s mailing address.
- **Affiliations.** Name and full postal address of the institution(s).
- **Corresponding author’s name and e-mail address.**
- **Author contributions.** Brief but clear account of the contributions of the different authors is mandatory. Contributions can be: conception or design; acquisition, analysis, or interpretation of data; drafting of the manuscript; critical revision of the manuscript for important intellectual content; statistical analysis; obtaining funding; administrative, technical, or material support; supervising the work; coordinating the research project, etc. (e.g., “Conceived and designed the experiments: DAB, MTN, AR and JHC. Performed the experiments: DAB, MTN, AR and JHC. Analyzed the data: DAB, MTN, AR and JHC. Contributed reagents/materials/analysis tools: DAB and JHC. Wrote the paper: DAB and JHC”).
- **Number of tables and figures.**
- **If any, number of supplementary tables and/or figures, with the following sentence: “Supplementary material (e.g. Table S1 and Fig. S1) accompanies the paper on SJAR's website”. In the text, they will be cited as: “Table S1/Fig. S1 [supplementary]”.
- **Running title of the work,** used in the heading of the pages of the printed article, should not exceed 90 characters (including spaces).
- **Topic,** selected from the following twelve: agricultural economics; agricultural engineering; agricultural environment and ecology; animal breeding, genetics and reproduction; animal health and welfare; animal production; plant breeding, genetics and genetic resources; plant physiology; plant production (field and horticultural crops); plant protection; soil science; water management.
- **Funding.** Indicate the sources of financing the study, or write “The author(s) received no specific funding for this work”
- **Competing interests,** if any (see point 4), or write “The authors have declared that no competing interests exist”
5.3.2. Abstract, keywords, and abbreviations

Special attention should be paid to the title and abstract, as these will influence readers’ decisions to proceed with the text.

Abstract. The abstract length is 250 words maximum. The style must be concise and must not contain references. The structure must include the following parts:

(i) **Aim of study**, set the goal or directly the specific objectives and, describe the relevance of the study;

(ii) **Area of study**, specify the geographic area in which the study has been made;

(iii) **Material and methods**, describe briefly materials and methods, crops or organisms involved must be identified, as well as soil type, chemicals, or other details which can be important for the interpretation of the results;

(iv) **Main results**, list and discuss relevant results (including numeric values of experimental results);

(v) **Research highlights**, one or two closing sentences with most relevant findings and implications.

For review articles, authors do not need following this structure but in any case length is limited to 250 words.

Additional key words. A maximum of seven key words should be included. These should not repeat words that appear in the title.

Abbreviations used. Include a list of all non-standard abbreviations used in the paper and their meaning.

5.3.3. Text of the article

The text of the article should contain the following sections:

Introduction. The introduction should contain sufficient background information about the work to allow it to be placed in the context of other research and to allow the reader to understand the relevance, proposed objectives and evaluation of the results. The introduction should conclude with one or two sentences that define the objectives and the essence of the article. Authors presenting articles to the “agricultural economics” section are invited to present introductions shorter than usual in journals of the Social Science area, not exceeding two pages and avoiding the use of subchapters.

Material and methods. Sufficient information should be provided to enable experiments to be repeated. For routine methods, a brief description and literature reference will be enough. New methods must be described in detail and, in the case of rarely used chemical products or equipment, the manufacturer’s name and address should be given.

Results. In general, this section should not include literature references; it should only describe the results of the experiments. Interpretations of the experimental data should be reserved for the Discussion section. The explanations provided in the figure and table captions should not be repeated in the text.

Discussion. The discussion should not be limited to describe experimental results and drawing conclusions; it should also be analytical and interpretative and should establish an association between the results obtained and other published works. The discussion may describe conflicting opinions and the results of other authors and indicate the value of these results for future works. This section should conclude with a few sentences that summarise the most relevant conclusions and implications. Conclusions do not contain references or enumerated/bulleted paragraphs, but provide a brief and precise summary of the most important findings of the work, their limitations, importance and future research needs.

Avoid combining the Results and Discussion sections into a single section (except in the case of Short communications). SJAR’s policy is to keep manuscripts merging the sections Results and Discussion only in those cases when this practice is strictly necessary, or adds some value to the work. In these cases, we require a formal statement by the authors explaining their reasons to do it so.

Acknowledgements. When it is considered necessary, acknowledgements should be made to the people, centres or bodies that have collaborated or supported the carrying out of the work. Authors are responsible for obtaining the necessary permission of the people or bodies mentioned, given that the readers might infer that they endorse the data and conclusions of the article. Contributors who meet fewer than all four of the above mentioned criteria for authorship (see point 4) should not be listed as authors, but they should be acknowledged.
References. When references are cited in the text, the author’s surname should be provided in parentheses, followed by a comma and the year of publication; e.g. “(Westfall, 1992)”. If there are two authors, the surnames should be followed by “&”; e.g., “…(Lynch & Walsh, 2007)”. If there are three or more authors, include the surname of the first author followed by “et al.” and a comma; e.g., “…(Keller et al., 2009)”.

When several references are cited, they should be ordered from oldest to most recent; if they are from the same year, sort them alphabetically “…(Playne & McDonald, 1966; Carazo et al., 2008; Pries et al., 2008)…”… If there are two authors with the same surname and year of publication include the initial, for example, “…Baccouri B et al., 2007; Baccouri O et al., 2007;…”.

References list. It must be in alphabetical order by authors’ surnames. In the case of several references from one author, papers that are sole authored should be presented first, followed by those with two authors and then references with three or more authors, respecting the chronological order in each case. If more than one of the articles was published in the same year, a letter should be added after the year to identify the reference (e.g., 2005a,b). Multi-authored works should list the first ten authors followed by “et al.”. Use abbreviated journal names. Examples are given below for literature references. Please do not include the DOIs of the articles. If the work is finally accepted for publication, they will be added by the editorial office staff.

References to a paper “in press” are permissible, provided that the paper in question has been accepted for publication (in this case, indicate the DOI or documentary evidence of acceptance). A reference to “unpublished work” is only allowed if it contains essential information; it should be available from the cited authors on request, and the names of all persons involved should be cited [first initial(s) followed by surname] in parentheses as “unpublished data”. Any person cited as the source of a “personal communication” must have approved the reference. This type of citation is permitted in the text only, not in the list of references. The use of “in preparation” or “submitted for publication” is not permitted.

Tables and figures should be cited consecutively in the text, numbered independently with Arabic numerals. They must be self-explanatory. Figures and tables must be very high quality and must be received in a suitable form and condition to be reproduced.

Tables should be headed by a number and title. Explanatory notes that facilitate the interpretation of the tables should be included at the bottom of the tables. Tables should have defined cells and must not be created using the space bar and/or tab keys.

Figures may correspond to diagrams or photographs. The figure number and legend should be presented at the bottom of the figure. After the acceptance of the paper, photographs should be sent separately as image files (jpg, tiff or similar) with a finished size of at least 300 dpi. Only under well-justified circumstances will colour photographs be admitted. Figures prepared with Excel or a similar program should be included in the text as MS Office Objects or sent separately in the format of their source program (*.xls or *.xlsx files).

Supplementary material (data that do not appear in the paper itself but that accompany it online), either figures or tables, should be included in the article itself, on separate sheets but in the same unique document. These data are peer reviewed, must be cited in the text and are subject to the same criteria as the data published in the paper. Supplementary files are not copyedited by SJAR; therefore, authors must ensure that the style of terms and figures conforms to the style of the article.

6. STYLE

Units and symbols. Use SI (International System) units in accordance with the recommendations of the International Organisation for Standardisation (ISO) or the Bureau for Poids et Mesures (BIPM) (http://www.bipm.org/utils/common/pdf/si_brochure_8_en.pdf).

Use abbreviations L, mL and µL for capacity or volume units. Express N (normality) as mmol/L and ppm as mg/kg or mg/L. Please spell out numbers one through nine, except when used with units. When units are not preceded by a number, the term should be written in full, without using the symbol (e.g. “metres”, “23 m”). Express decimals using a full stop (e.g., 3.14) and thousands with commas (e.g., 21,314). For decimal quantities <1, place a zero before the decimal point. Report dates with the day first, then the month, and then the year.
**Abbreviations** must be defined when first mentioned in the abstract or text [e.g., “polymerase chain reaction (PCR)’’] and again in the tables and figures. Abbreviations must then be used throughout the article, except at the beginning of a sentence.

**Style** must be that of scientific English throughout the article. Please ensure that a science editor reviews the paper before submitting it for publication.

**Mathematical equations.** Use an equation editor for mathematical expressions whenever possible. Avoid inserting formulas as images.

**Parameters.** It is a common mistake to use the term “parameters” instead of “variables” or “characters”. Variables are quantities that vary from individual to individual (e.g., length, width). By contrast, parameters do not relate to actual measurements or attributes, but to quantities that define a theoretical model; they are properties of a collection of individuals (e.g., mean and SD). In other words, you measure a variable; a parameter describes the measurements, such as the mean.

Never start sentences with a numeral: “Four plants and five years ago” is correct, not “4 plants and 5 years ago”. This means that some sentences may need to be rewritten: “Farmers collected 4,000 fruits the first year” instead of “4,000 fruits were collected the first year.”

**Scientific names.** Genus must be written in full the first time an organism is mentioned in the abstract or text and in every table and figure. If you are discussing several different species within a genus so that the genus is the same for each species mentioned, write genus + species in full the first time each new species is mentioned, even if it seems redundant. After the first time, use the genus abbreviation with a period.

Genus and species are always italicised. Do not italicise "spp.", "sensu stricto" or "sensu lato", which may follow genus and species. Genus is italicised when it appears alone (i.e., Phytophthora infections).

Latin binomials or trinomials and authorities, when first mentioned, must be given for all plants, insects and pathogens (e.g., Solanum lycopersicum L).

Both common and chemical names of pesticides must be given when first mentioned (e.g., “Atrazine (2-chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine) was most persistent...”).

Identify soils at series and family level, or at least the Great Group, when first mentioned.

Mark botanical cultivars in single inverted quotation marks, or use the abbreviation cv. when first mentioned (e.g., tomato ‘Royesta’ or cv. Royesta). Subsequently, this can be referred to as Royesta tomato or Royesta cultivar.

Animals (breed, sex, age, and body weight), diets, measurements and statistical models should be written in a clear and detailed way.

**Statistical results.** In-line statistical results should be presented as: (i) the test statistic followed by degrees of freedom as subscript(s), e.g., $F_{1,12}=1.74$ or $t_{8}=31.8$; (ii) followed by the $p$-value, or NS (for non-significant), e.g., $F_{1,12}=1.74$, $p>0.05$.

In tables, statistical results should be comprehensive, facilitating future meta-analyses. Depending on the details of the analyses, the results reported may include parameter estimates, test statistics, degree of freedom, significance levels and error/residual model information, e.g., error MS and d.f. in ANOVA or regression models. Because exact $p$-values can be useful for meta-analyses, we recommend that these be quoted even when non-significant, e.g., $t_{23}=0.25$, $p=0.34$, or $F_{2,32}=1.12$, $p=0.55$. However, non-significant tests (i.e., $p>0.05$) should always be interpreted as such and not reported.

7. **CORRECTION OF PROOFS**

Page proofs of articles are sent to authors by email as PDF files. Corrected proofs (by means of the Acrobat system) should be sent back to the Editorial Office within three days by email. Proofreading occasionally generates additional queries for the author. If corrections are not received in due time, the editors reserve the right to perform the corrections that they consider most appropriate.

The articles are published in three formats: PDF, HTML and XML. Due to the difficulty to correct the three types of proofs, authors are asked to check only for misprints or syntactic errors but not to modify the manuscript.
8. EXAMPLES OF LITERATURE REFERENCES

Journal article

Books

Chapters of books

Doctoral or master thesis

Conference proceedings

Work documents

Legal documents

9. SJAR POLICY ON ARTICLE WITHDRAWAL
Articles that have been published shall remain extant, exact and unaltered as far as possible. However, very occasionally circumstances may arise where an article is published that must later be retracted or even removed. Such actions can only occur under exceptional circumstances, such as:

Article withdrawal: Only used for articles which represent infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, and fraudulent use of data or the like. A retraction note titled “Retraction: [article title]” signed by the authors and/or the editor is published in the paginated part of a subsequent issue of the journal and listed in the contents list. In the electronic version, a link is made to the original article. The online article is preceded by a screen containing the retraction note. It is to this screen that the link resolves; the reader can then
proceed to the article itself. The original article is retained unchanged except for a watermark on the PDF indicating on each page that it is “retracted.”

**Article removal:** In an extremely limited number of cases, it may be necessary to remove an article from the online database. This will only occur where the article is clearly defamatory, or infringes others’ legal rights, or when the article is, or we have a good reason to expect it will be, the subject of a court order, or when the article, if acted upon, might pose a serious health risk. In these circumstances, while the metadata (title and authors) will be retained, the text will be replaced with a screen indicating the article has been removed for legal reasons.