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Preamble

Hints for writing papers for submission to *Tropical Grasslands-Forrajes Tropicales*

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Introduction

Whether you are preparing a paper to share results with your peers or as proof of achievement for promotion, a good research paper must always be an informative, concise and honest account of the work done. It must also follow the standards prescribed by the journal. No matter how good you think the paper might be, reviewers and editors must also think it is a good paper before it can be published. Their role is to ensure submissions are scientifically, logically and grammatically sound and most importantly, readable. Over a 50-year career in forage research and development in Australia and overseas, I have been both author and reviewer, and present here a number of hints that I believe will help intending authors avoid some of the pitfalls I have encountered. While information exists on general scientific writing (Simon et al. 2020) this paper is specific to Tropical Grasslands-Forrajes Tropicales (TG-FT), but does not replace "Author Guidelines" for publication in the journal and should be viewed as an adjunct to it.

Originality of the research

Accuracy and scientific honesty are paramount in research, not only in the conduct of the experiment but also in the reporting of results. A basic premise in publication is that the work is original and has not been published previously. Author Guidelines for TG-FT clearly state: "Papers are accepted for review by the Journal on the understanding that the material presented has not been and will not be published elsewhere." The not-uncommon practice of racing to publication with interim research results with a follow-up paper on completion of the work may actually breach this principle. Unless further work contradicts or provides additional support for some aspect of the earlier findings, the originality of the later work may be called into question. I have also come across an instance of an author who submitted a paper to more than one journal in the hope that one would accept it. This is an unprofessional practice that is unacceptable to journals and readers alike. Pressure to publish is ever-present. However, while it might seem an advantage to publish numbers of papers in the interest of promotion, it is the quality of the work that really counts. One major paper may carry more weight than a number of minor papers.

Readability of the paper

A research paper is of little value if it does not hold the reader's attention. Readers will quickly lose interest if the paper is too long, if the language is too difficult to understand, if the messaging is not clear or if the setting is not adequately described. You must attempt to inform your readers, recognizing that few will know the environment at the site of your experiment. Factors such as latitude, longitude, elevation, soil description (including parent rock), native/natural vegetation and rainfall (amount and distribution) are useful surrogates to help the reader develop a mental picture of the site and possible environmental conditions.

While there is a need to provide enough information for the reader to understand the methods and data collected, it is equally important not to provide too much information. Excessive information can result in losing the reader's attention; you should ensure that the paper is free from all elaboration and superfluous detail, i.e. it should be concise. The journal has word limits on papers that should always be kept.

Correct grammar and appropriate punctuation are essential in providing the logic and clarity necessary in a scientific paper – ambiguity is an enemy of clear communication. If there is no internal editorial system in your research agency, you might consider approaching an English-speaking colleague to check the paper, even if you feel you are competent in English. A second set of eyes reading a document and commenting proves beneficial in most cases. While the journal editor or reviewer may choose to make minor changes to the paper to improve English expression, it is not the role of either to make the major changes that prove necessary in some submissions.

Suitability for the journal

TG-FT provides the opportunity for researchers to publish freely in a reputable, peer-reviewed journal specializing in all aspects of forage-based production systems. Your paper should fit one of the subject categories for the journal:

- Research Papers
- Short Communications
- Genetic Resources Communications
- Farmer Contributions
- Review Articles
- Regional Contributions

These categories are expanded in Author Guidelines: www.tropicalgrasslands.info/index.php/tgft/about/submissions#authorGuidelines

You can get a good idea if your paper is suitable for publication in TG-FT, by checking topics of papers published in recent volumes of the Journal.

Following journal format

Author Guidelines provides a clear outline of the standards of presentation and layout required for publication in TG-FT. It is always a good idea to check recently published papers in the Journal to ensure format standards are met. Failure to follow the fairly simple journal formats imposes extra work on editorial staff and could result in papers not being accepted. This is particularly so in presentation of cited references in the Reference list at the end of the paper. Pay strict attention to the style used by TG-FT, as style used varies from one journal to another. An editor or reviewer loses patience when authors are inconsistent in reference presentation in the list.

Paper sections

Good research papers derive from well-designed experiments carried out by competent and diligent scientists. You should give thought to appropriate data to collect as well as future statistical analysis, data interpretation and discussion when designing your experiment. This is not to suggest that you should anticipate data trends – just be sure your design provides the necessary data and the flexibility you need to test your hypothesis.

A good introduction should provide the context for the research, the current state of knowledge on the topic and any knowledge gaps that you are attempting to fill with the research and the hypothesis that you are testing.

The materials and methods should provide sufficient detail on the experiments to allow other researchers to follow and repeat your methodology and show the credibility of the experimental approach and confidence in the data. It is important to clearly indicate the experimental design, replication, intervals for data collection and the precise variables and units of data collected. Always check the author guidelines for the correct way to present the units following journal format.

Your data, which serve to provide the reader with a clear picture of your research outcomes, are presented in Results. You should restrict the data you choose to publish to those elements necessary to support your argument or finding. When all data are available, it is wise to examine the data to determine the key findings that provide answers to the 'Null Hypothesis' you set out to test. These should be the focus of the material presented. Minor findings can be included at your discretion. The presence of large indecipherable amounts of data in a paper serves only to overload and alienate the reader. Data should be statistically analysed and significant differences presented in the paper. Every significant difference found does not need to be mentioned in the text. Allow the reader the option of pursuing lesser issues in tables. Data can be presented in text, tables or graphs, but the same data should not appear in more than one of those formats. Tables are the most appropriate and preferred presentation medium for data, where you believe quantification of a response will assist the reader in interpreting and subsequently citing your paper. Bar and line graphs enable the reader to observe trends, but make it more difficult to cite quantities. While it is mostly inappropriate to repeat in text data already presented in tables and figures, there may be occasions where this is acceptable, e.g. to highlight extremes in Results, or to compare with previous work in Discussion. If you choose to use graphs, ensure that the axes are clearly and meaningfully labeled. "A picture is worth a thousand words" is an oft-quoted adage. Good, clear images can help the reader envisage your situation and even levels of response in an experiment. However, images do not replace data, nor are they of any value if they do not contribute to your narrative. Remember that poorly presented graphs can be misleading, e.g. where the values on the y-axis start above zero and the proportional differences between treatments can appear larger than they really are. Papers with findings that only support those in other published research, with no significant differences between treatments being tested,

lack of appropriate controls or based on short duration experiments that raise doubt on the reliability of the data are unlikely to be accepted for publication.

In the Discussion you should discuss how your findings relate to the Null Hypothesis you set out to investigate and how your findings compare with other published data. It is not meant to be a review of all other published data on the topic. The aim is to leave the reader with a clear understanding of what your research has contributed to our understanding of the subject area. Only major or novel findings need be discussed. Remember that the length of the Discussion section is not necessarily directly related to its clarity.

You may choose to include a Conclusion to highlight the practical implications of your work and to point out possible future work. However, a Conclusion is not meant to be merely a summary of the completed work and is unnecessary if you have already merged such detail into your Discussion.

References should be used throughout the paper to support claims made in the document or to indicate the methods or procedures used. You should cite only one or two references to support each point you are making. Authors should avoid citing references from predatory journals. These journals lack scientific credibility because of lack of a rigorous peer review and editing process and may contain false or misleading information (Elmore and Weston 2020). Citing them in your paper reduces its credibility and the TG-FT editorial team will ask for references from potentially predatory journals to be removed. The References section should be restricted to literature cited in your paper. It is not intended as an exhaustive list of references on the subject matter of the paper.

Plant taxonomy

Plants are referred to by scientific names, common or vernacular names and cultivar names or accession identifiers. While many people prefer to use common names, it should be recognized that these are often specific to a particular language or district and mean little to people outside that language group or district. Cook and Schultze-Kraft (2015) expand on this point, providing examples of the confusion that can arise through the unqualified use of common names. Further examples of the variability of common names, particularly for a widely distributed species such as *Megathyrsus maximus*, are shown in Cook et al. (2020). Accordingly, scientific names must always be used in a technical paper because they are universal, and accuracy and clarity are essential in science. While it is acceptable to mention a local common name, it is not acceptable to shift between scientific names and common names. Be aware that scientific names of plants are reviewed by taxonomic botanists from time to time to ensure that names conform to rules set out in The *International Code of Nomenclature for algae, fungi, and plants* (Turland et al. 2018). These reviews can sometimes lead to adjustments in the name of a plant. In the interest of precision, you should ensure that you use currently accepted plant names. The U.S. National Plant Germplasm System (GRIN) Plant Taxonomy is used as the standard for the Journal for both scientific and common names and must be carefully followed. This can be consulted at npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch. While Cook and Schultze-Kraft (2015) provide a comprehensive list of tropical forage name changes, it is always best to check in GRIN for any changes since 2015.

The name used in the Abstract should be genus and species, together with a lower level identification (accession/cultivar name) if necessary, e.g. *Megathyrsus maximus* cv. Mombaça. To ensure that the reader knows precisely the species to which you are referring, it is best to include the authority, usually abbreviated, when the species is first mentioned after the Abstract e.g. *Megathyrsus maximus* (Jacq.) B.K. Simon & S.W.L. Jacobs cv. Mombaça. Since many people know this species by its former name, you may either refer to the former name in the text or include the synonym in brackets afterwards, e.g. (syn. *Panicum maximum* Jacq.). Thereafter in the paper, you need to use only the cultivar name or the accession identifier. In a multiple species comparison, it may help the reader to follow the various species x accession entries in Results and Discussion, by using abbreviations of species names preceding the accession number.

Recent taxonomic revisions of important forage genera include:

- *Brachiaria* – mostly to *Urochloa*
- *Pennisetum* – mostly to *Cenchrus*
- *Desmodium* – many remaining in *Desmodium*, but some important forage species transferred to *Grona* and *Bouffordia*.

General hints for getting your research published

- In your interpretation of statistical analysis, do NOT say “there was a numerical difference between the means but it was not significant” or “the difference

approached significance"; a difference is significant at the probability level chosen or not.
- Do not dwell on differences that come up as statistically significant but are not biologically significant within the current state of knowledge.
- Keep the language simple and focused; your aim is to inform readers, not to impress them with your knowledge of language.
- Avoid the use of "filling words" that do not contribute to the meaning of a sentence, e.g. basically, generally, moreover; or other unnecessary words, e.g. green in color.
- Try to avoid long sentences that are often unclear (preferably no more than about 20 words).
- Question the need for using a definite article (the) and indefinite article (a, an); if the sentence makes sense without it, leave it out.
- Do not use degree adverbs that add little precision to an already imprecise statement, e.g. the grass grew extremely vigorously.
- Check for ambiguity, which can particularly arise from inadequate or inappropriate punctuation or the use of an ambiguous pronoun, e.g. rainfall was adequate for good grass growth but it ("rainfall" or "grass growth"?) was insufficient for the cattle.
- Avoid repetition in making a point; this is not a debate or a project proposal where repetition can be a useful tool.
- Be consistent throughout the paper in the way in which you refer to a task or action, e.g. changing between "harvest" and "cut".
- "Data" is a plural noun (singular "datum") and should be followed by a plural verb, e.g. data are, NOT data is.
- Use conjunctive adverbs (transition words) between sentences only where appropriate, e.g. however, therefore, etc. These can be used following a semicolon to join two clauses, but should not be used as conjunctions following a comma. In this case, use "but", not "however".

Conclusion

Rejection of papers by journals can be a confidence-destroying experience, and may result in a paper with potential being abandoned for future publication. The best way to avoid disappointment in attempts to communicate your research findings to the world is to submit a manuscript that you feel confident meets the standards of the journal. Extra effort during the planning and writing stages would ensure your paper meets the standards required to be accepted. Do not be discouraged if your paper is returned with many suggestions for change. Editors and reviewers are experienced in paper writing and their aim is to assist you in enhancing your paper so it communicates your findings to other researchers and farmers. Accept their advice and learn from the experience.

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(Note of the editors: All hyperlinks were verified 18 January 2022).

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