Criteria and Best Practices for Reviewing Manuscripts for *The Plant Genome*

Overview

Manuscript processing involves the following activities:

- **Admin** – Inspects the manuscript according to an established checklist and either returns it to the author for corrections or assigns it to the editor.

- **Editor** - Determines if the writing is suitable for peer review. Manuscripts written with poor English, to the extent that the author's meaning is unclear, should be returned to the author by the editor. The message to the author will include a recommendation to obtain professional assistance to correct the manuscript. If the manuscript is acceptable, it is assigned to an associate editor (AE). The editor also screens manuscripts that fall outside the generally defined scope of *The Plant Genome.* The Editor reviews AE recommendations and renders the final decision on all manuscripts.

- **Associate Editor** – This editorial board member is responsible for arranging reviews, managing the revision process, if warranted, and, ultimately, submitting to the Editor a recommendation to release the manuscript to the author or accept it for publication.

The Plant Genome relies upon its editor, AEs, and reviewers to provide timely and useful reviews, and editorial decisions, as a professional courtesy to authors and readership. Please make every effort to process manuscripts in accordance with the timelines presented here.

AE INITIATES REVIEW PROCESS

Evaluate Manuscript – It is not unusual for the AE to determine that the manuscript does not qualify for review based on scientific reasons. Scientific papers may not be published in any of the Crop Science Society of America journals, books or other scholarly publications unless two unbiased professional scientists agree the paper is acceptable. Similarly, reviews from a minimum of two unbiased professional scientists must be obtained to release a manuscript. The two scientists can be the editor and AE or the AE and a reviewer. Refer to Chapter 2 of the Editors' Handbook for checklists on scientific content, scientific presentation, and manuscript style. This chapter also provides a checklist for abstracts. These checklists contain criteria to be used in evaluating manuscripts that are being considered for publication in *The Plant Genome.* Chapter 2 provides instructions on managing the review process, including a list of errors that editors should handle with the author and those that can be corrected at headquarters. This is arguably the most important chapter of the handbook and should be read by all editorial board members.

Establish Reviewers – Commitments to review a manuscript should be obtained within ***10 days*** of the assignment to the AE. Assuming a few of the peers contacted will either decline the invitation or fail to respond, the AE is encouraged to send three or four invitations immediately upon being assigned to a manuscript. The goal should be to obtain at least two commitments to review the manuscript. In addition, the AE should serve as one of the reviewers, unless the subject matter is too far outside their area of expertise. The entire review of the original submission, from assigning a manuscript to the AE to receiving and processing the reviews, should require no more than ***30-45 days***.

Preferred Reviewers and Reviewer Accounts – Authors have the option to suggest preferred reviewers. However, the AE is not obligated to ask these individuals to serve as reviewers. To invite a reviewer, this person will need an account in ScholarOne. Accounts are based on e-mail addresses, and, because many individuals have two or

three e-mail addresses, it is important to search on a last name before creating an account. If one reviewer has two accounts, it many cause confusion. In those cases, the reviewer has had an account with ScholarOne and logged in using the old account. If the AE creates a new account for this user, the reviewer will not find the manuscript, as it will be located in the new account only. Again, accounts are based on e-mail addresses rather than names.

AE MANAGES REVIEWS

After obtaining the required number of reviews, the AE will either return the manuscript to the author for revision or make a release or accept recommendation to the Editor.

Proofread Reviews – The AE is advised to read reviews, and edit them as needed, before sending them to authors. Reviews should not contain personal attacks, either directly or indirectly. We have received complaints when these reviews were inadvertently sent to authors. The AE may also wish to contact the reviewers and explain to them that the comments are inappropriate.

Summarize Reviews – It is helpful to provide the author with a paragraph or two that summarizes the comments offered by the reviewers. These paragraphs should highlight the parts of the manuscript that are particularly deserving of attention during the revision process.

MS-Word Track Changes – Reviewers can and have been using the track changes feature of MS-Word to edit and review manuscripts. This creates a problem with reviewer anonymity. If the reviewer uploads an MS-Word file, ScholarOne will convert it to PDF format and strip out the reviewer information. If the reviewer uploads a PDF file, it will frequently contain information that identifies them. This is a complex problem and the AE may have to correspond with the reviewers to solve it.

Late Reviews – If, for example, three individuals agree to submit a review and two of the three reviews are received, the AE has enough reviews to make a recommendation to the TE. If a decision is made on the basis of the first two reviews received, the third reviewer will be unable to submit a review thereafter. This has the potential to create some conflict with reviewers, particularly slow ones. Prior to making a recommendation, the AE should contact reviewers who had not submitted a review, informing them that their review is still needed and must be received by a certain date. If they attempt to submit a review after the designated date, when the AE submits a recommendation in ScholarOne, the attempt will be unsuccessful.

AE REQUESTS REVISION

When the AE recommends major revision, the manuscript goes back to the author, who is given two months to submit the revision. Extensions to this two month period are generally granted upon request. When the author uploads the revision, the manuscript goes into the queue 'Complete AE Checklist'.
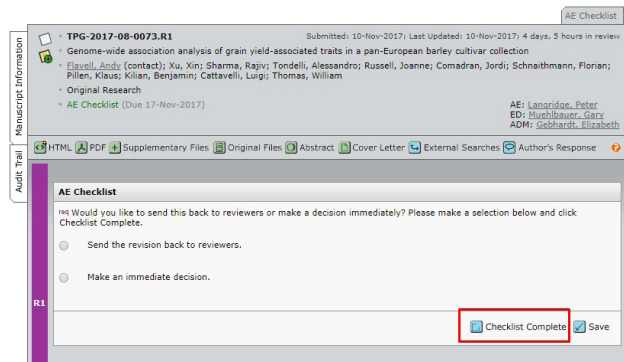
If the AE would like to get additional reviews on the revision, it can be done at this point. In communications with the authors, the AE should not convey the impression regarding the approval or release of the manuscript. The AE must remain as neutral as possible.

Repeated Reviews – Rather than allowing a manuscript to go back and forth several times between author-reviewer-associate-editor, it might be appropriate to recommend release for a borderline manuscript and encourage resubmission. Try to prevent cycling manuscripts through the system numerous times with authors. As mentioned in the Editors' Handbook (Chapter 2), if a second revision is necessary, in most cases the associate editor should evaluate the revision without sending it to reviewers.

Only Authors May Revise Manuscripts – In Scholar-One, all revisions must be approved by the authors. If the AE makes minor changes/suggestions to a manuscript, the revised manuscript must be sent back to the author for approval. Only the author can upload revisions to the manuscript. This keeps the entire editorial process inside ScholarOne and also ensures that *The Plant Genome* obtains the proper files for publication.

Response to Reviewers' Comments – For each comment offered by a reviewer, the author should indicate if it was accepted or rejected in the revision. If the latter, the author is expected to justify that decision. This detailed response from the authors is very helpful in evaluating the revision.

## AE RECOMMENDS RELEASE OF A MANUSCRIPT

Please accompany a recommendation of acceptable for publication or release to the author with a brief justification for this recommendation. This is particularly helpful when recommending release. In ScholarOne, space is provided to enter one or two paragraphs justifying a recommendation.

Features Of ScholarOne

Advanced vs. Quick Search – On the AE dashboard there is a search box on the right-hand side of the page. The default is a quick search. An easy way to find a single manuscript is to use wildcards (*) with parts of the

manuscript ID number. For example, *0123* will find manuscripts TPG-201X-02-0123-ORA and its revisions. Otherwise, open any version and go to the "Manuscript Information" tab, then scroll down to the "Version History" box. To access the details for a particular version, click on the magnifying glass of the desired version under "Switch Details."

To set up an advanced search, change the 'Manuscript ID' field to 'Adv. Manuscript Search' in the quick search bar.
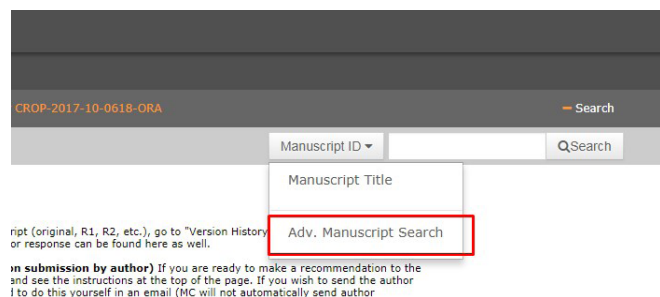
To see all the manuscripts that have been assigned to the AE, the AE's last name can be entered in the appropriate box. Then select the search button at the bottom of the page. Results can be saved by selecting "Export to CSV."

Supplemental Material – Supplemental material needs to be reviewed along with the manuscript. Files containing supplemental material can be accessed via the 'Supplemental Files' icon, which is located next to the 'Original File' icon in ScholarOne. If the supplemental files are not intended for publication, the author may state that in the cover letter.

Audit Trail – Remember to access the audit trail, which is one of the left-hand tabs on the manuscript view. It shows the editor everything that has taken place regarding this manuscript.

Reviewer Scores – Fill out the reviewer scores when the reviews are received. This can be done when the reviews are read. They may prove to be very helpful.

Back Button – Never use the browser back button on the ScholarOne site. Please use the buttons available on the page to navigate the site.

Resources

Challenges with ScholarOne – If problems are being experienced with ScholarOne, there are two options for assistance: (i) use the online help, available in the upper right hand corner of the screen or (ii) contact the Admin or Managing Editor at headquarters (ADM is listed after the AE and Editor for each manuscript). For questions pertaining to scientific content or other editorial processes, contact the Editor.

Unavailable to Handle Manuscripts – Associate editors can indicate dates during which they will be unavailable by clicking on their username at the top of the screen and navigating to 'Username and Password'. During that period, 'n/a' will appear next to the name in dropdown lists and in reviewer selections.

Record Retention – If there are manuscript-related records outside of those contained in ScholarOne, and if the manuscript has been published, they can be discarded about three months after publication. Records of released manuscripts should be retained for two years after the release date. See Chapter 1 of the Editors' Handbook for more information.

Scenarios and Recommendations

1. Use of the recommendation "accept with minor revisions" and "accept with major revisions" and then during the revision process, oftentimes after several months, the manuscript is rejected.

There have been several cases of manuscripts with the recommendation "accept with minor or major revision" and upon reviewing the revised version the reviewers and AE reject the paper. Of course, if the authors do not address the criticisms of the manuscript it should be rejected. However, AEs need to reject papers during the first round that do not meet the standards described below. In addition, there have been other cases where an independent set of reviewers were used to review the revised version and they have rejected the paper for reasons that were not described within the initial review.

Recommendations:

a. Accept with minor or major revisions should only be used when the paper will be accepted as long as the authors address the reviewer and AE criticisms. These criticisms need to be of the type that are relatively easy for the authors to address. If there are fundamental problems with the study that the authors will not be able to address in a revised version the manuscript should be rejected.

b. If possible, the AE should review the revisions and make a decision without resending the manuscript to reviewers.

c. In the rare cases where substantive changes have been made and the AE feels additional reviews are needed, the reviewers that reviewed the first submission should be used to review the revised version(s) where possible, unless there is a specific need for a new reviewer (e.g. if the manuscript has been revised beyond the expertise of an initial reviewer, or the AE considers that initial reviewer(s) were unreasonable/unsatisfactory and considers that another review is necessary. However, in most cases the AE can act in this regard).

2. If manuscripts do not meet the standards described below the Editor and Associate Editors should reject them before sending out for review.

Recommendation:

a. The Editor should reject manuscripts that do not meet the standards for the journal or are so poorly

prepared that the authors need to completely rewrite and organize the manuscript. However, if there are manuscripts that the Editor does not immediately reject, the AEs can reject them before they are sent out to the reviewers. Try not to waste reviewer time with manuscripts that obviously will not be accepted. If you would like to reject a paper before sending for review please write a few sentences that indicates the limitations of the paper and the reason for rejection.

Criteria for Acceptance

Overall, the standards of the journal need to be raised. For a manuscript to be accepted it needs to represent a substantial contribution to the literature. Below are some of the criteria that *The Plant Genome* should use as we review papers.

Definition of contribution to the literature:

1. Novel understanding of the genetic control of a trait.
2. Novel approaches or tools for genetic analysis or crop improvement.
3. Novel insight into the function of a gene(s).
4. Novel insight into genome organization, epigenetics, comparative genomics, diversity analysis, and crop domestication.
5. Novel databases and analytical tools or substantial improvement of databases and analytical tools for plant genetics and breeding.
6. Association mapping studies (GWAS) that go beyond identifying the location of QTL associated with a trait. Additional work can include full exploitation of the phenotypic data based on trait correlations, origin of release date of genotypes, validation of QTL in an independent population(s), use of expression atlas or other data to prioritize candidate genes for discussion, etc. and can include but not restricted to mutant or transgenic analysis. Novel traits, experimental approaches, etc. are acceptable. In addition, below are the expectations for authors of GWAS studies.

   a. The process of conducting phenotyping needs to be fully described (how were plants grown, experimental design, what precisely was measured and how, etc.).
   b. Raw phenotypic and genotypic data must be provided as a supplemental table or as a link to e.g. DataDryad to allow subsequent meta-analysis by other researchers. Metadata should be provided to fully describe experimental conditions.
   c. A supplemental table (or link) should be provided

with a) the SNP allele scored, b) a position in the context of a reference sequence (or with adjacent context sequence provided), and c) the p-value for each trait and each SNP.

Reasons to reject a manuscript:

1. Incremental advances in any of the above research areas should not be published.

Specific guidelines for topic areas:

1. Confirmatory work should not be published unless the manuscript provides a compelling argument for why the results are of interest beyond previous publications.
2. Manuscripts that only describe marker(s) associated with a trait should not be published unless the work describes a substantial body of associations that are cumulatively novel with high probability of impact, or there is a unique aspect to the manuscript beyond the location of the locus (e.g., the trait is novel or the genetic architecture associated with the trait is novel). Results of such analyses should be substantiated beyond statistical associations either by further experimentation or critical cross validation of literature.
3. RNA-seq experiments or gene expression analysis that do not provide novel insight into some aspect of plant biology (trait) should not be accepted. (For example, simply identifying genes up- or down-regulated in response to a stress is not sufficient for publication in *The Plant Genome*, regardless of how important that stress is.)
4. Genomic selection approaches that either do not substantially improve the process or provide novel insight should not be accepted.
5. Fine mapping work that only reports new markers that are tightly linked to the gene, which has previously been mapped and to which markers are already linked, should not be published.

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