Guidelines for authors and reviewers of research conducted in controlled environment systems. (Z08-ingram125241-Oral)

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Abstract:

Controlled environment systems (CES), which include both growth chambers and greenhouses, offer great potential to speed scientific advances by providing well defined environments in which plants grow. If not correctly managed and maintained, however, it is possible to misinterpret results of research conducted in CES. Researchers need to understand both the capabilities and limitations of CES. We present recommendations regarding experimental design for CES, including issues related to repetition of experiments and replication of treatments, the limitations of CES research, and quality assurance. We also present recommendations for monitoring and control of systems for temperature, light, humidity, and carbon dioxide. Reviewers should keep in mind that these are guidelines, not rigid rules. We must also consider the objectives of the experiment and intended use of the results as we apply these guidelines.

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