2021 Focus Issue on Digital Agriculture

Edited by Rod Wing, Jennifer Clarke, Jiming Jiang, Ning Jiang, Jesse Poland, and Mark Tester

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Within the next few decades, our population will increase from 7.6 billion to an estimated 10 billion, which raises the question of our lifetime: "How can we feed our world without destroying our planet?" The answer to this question is complex and multidimensional and will require novel solutions led by data-driven science and transformative future-focused innovation. The Focus Issue on crop improvement in the age of Digital Agriculture will cover a broad range of topics relevant to improvement of plant-based agricultural systems. Articles covering the following topics will be considered: genetic diversity, genomes/transcriptomes, microbiomes, and linking such information to phenotype (in the field and controlled environments) to breed new varieties/crops that are high yielding, nutritious, and sustainable; requiring less water, fertilizers, and pesticides, yet able to grow on marginal lands with reduced greenhouse gas emissions and energy inputs. The Digital Agriculture Focus Issue seeks submissions of Research Articles, Research Reports, and Letters in the areas mentioned. The issue will include reviews that synthesize the current state-of-the-art and future prospects in sustainable precision agriculture, including but not limited to phenotyping, artificial intelligence and deep learning, robotics, databases and data sharing, pangenomics, genomic selection, and neodomestication.

Authors submitting to this Focus Issue should indicate their interest in the cover letter when submitting papers online at http://pphys.msubmit.net/. Please select **"Digital Agriculture"** from the Focus Issue list in the online submission system. Articles published in *Plant Physiology* on this topic within 2 years before and after the Focus Issue publication date will be collected as part of the online Focus Collection on this topic.

For inquiries, please contact the editors of the Focus Issue:

Rod Wing (rwing@ag.arizona.edu), Jennifer Clarke (jclarke3@unl.edu), Jiming Jiang (jiangjm@msu.edu), Ning Jiang (jiangn@msu.edu), Jesse Poland (jpoland@ksu.edu), and Mark Tester (mark.tester@kaust.edu.sa)