Special Issue

Trade-Offs in Crop Production: Yield and Quality, Resource Use Efficiency, and Environmental Sustainability

Message from the Guest Editors

Achieving sustainable crop production requires balancing trade-offs among yield, quality, resource use efficiency, and environmental sustainability. High crop yields are essential for meeting global food demand, but they often come at the expense of reduced crop quality and the increased consumption of resources, such as water, fertilizers, and energy. Conversely, optimizing resource use efficiency and improving environmental outcomes may sometimes limit yield potential. For example, reducing nitrogen fertilizer application can mitigate environmental issues like water pollution and greenhouse gas emissions but may also compromise crop yield and quality. Innovative agricultural practices, including precision farming, advanced breeding techniques, and sustainable nutrient management, etc., offer promising solutions to balance these trade-offs. For a paper to be included in this Special Issue, the research must involve field experiments, preferably with inter-annual repetitions. For tank or pot experiments, yield-related factors must have at least two years of repetition.

Guest Editors

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