



Water Needs of Crops and Irrigation Management under Climate Change

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Message from the Guest Editors

Given the expansion of irrigated farmland, water shortage is escalating in the agricultural sector. Great efforts should be made to balance the water needs and supply while achieving high crop productivity. However, the climate system is changing, and the global average surface temperature has increased by 0.65–1.06 °C. Climate change brings about temperature rises and erratic rainfall, increasing crop vulnerability in yield formation. Crop water needs are expected to markedly increase with global warming, further accelerating the world's water crisis. In this context, global food security should be guaranteed by optimizing crop water management and improving crop adaptation to climate change. Understanding crop water needs under climate change is of irreplaceable importance for the sustainable development of agriculture. This Special Issue aims at providing an overview of the latest developments in the major fields of crop water needs, water physiology, drought mitigation, water-saving techniques, smart irrigation, and strategies for optimizing crop water management in the context of climate change.





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Message from the Editor-in-Chief

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