# Special Issue

# Irrigation and Fertilizer Requirements of Crop Tillage Systems Under Future Climate Change Scenarios

## Message from the Guest Editors

Water shortages and fertilizer pollution significantly affect agricultural production. With global climate change intensifying, the balance between water, fertilizer, and climate has become crucial for agricultural producers. A report by the World Resources Institute and FAO reveals that 60% of irrigated agriculture faces extreme water stress, affecting 1.2 billion people and nearly 1 billion hectares of land. Improving irrigation efficiency is key to ensuring food security. The global fertilizer market is projected to reach USD 148.08 billion by 2030, but overuse leads to environmental issues like soil degradation, water pollution, and greenhouse gas emissions. Climate change exacerbates water scarcity, evaporation, and crop water needs. This Special Issue aims to explore the relationship between crops, irrigation, fertilizer, and climate change, focusing on optimizing crop tillage systems through precise regulation of water and fertilizer under future climate scenarios.

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