



Crop Cultivation Physiology and Farmland Greenhouse Gas Emission Reduction

Guest Editors:

Prof. Dr. Lijun Liu

College of Agriculture, Yangzhou University, Yangzhou, 225009, China

Prof. Dr. Hao Zhang

College of Agriculture, Yangzhou University, Yangzhou 225009, China

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Message from the Guest Editors

At the farm or field level, multiple agriculture activities on the land interact with one another, playing important roles in crop yield and the biogeochemical cycling of carbon, nitrogen, and other elements and thus affecting soil carbon storage and greenhouse gas (GHG) emissions. The effects of these activities on the agricultural ecosystem can result in synergies or in tradeoffs to obtain the destination of crop yield increase and GHG emission mitigation. To the extent possible, all management decisions must be incorporated in the quantification of a farm's yield formation and GHG impact.

This SI focuses on the development and assessment of crop management, crop breeding, and biotechnology advances on the potential synergies of crop yield and GHG emission reduction. The corresponding physiological mechanisms related to this process should be evaluated to advance our understanding on how to mitigate the GHG emission without crop penalty. This SI welcomes highly interdisciplinary quality studies from disparate research fields, including crop management, crop physiology, environment science, and crop growth models. Original research articles and reviews are accepted.





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Prof. Dr. Les Copeland

Sydney Institute of Agriculture,
School of Life and Environmental
Sciences, The University of
Sydney, Sydney, NSW 2006,
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Message from the Editor-in-Chief

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Agriculture Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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