

Topical Collection

Functional Biostimulants: A Toolbox for Securing Yield Stability and Sustainability

Message from the Collection Editors

The EU fertilizer regulation 2019/1009 define a plant biostimulants as ‘a EU fertilizing product the function of which is to simulate plant nutrition process independently of the products nutrient content’. Plant biostimulants stimulate natural processes in crops to i) enhance nutrient uptake, ii) nutrient use efficiency (NUE), iii) resistance to abiotic stress, and quality traits and iv) increase the availability of confined nutrients in the soil or the rhizosphere. They offer the opportunity to enhance fertilizer use and thus contribute to more sustainable crop production. The actual research between the scientific community and private fertilizer industry has led to design and to develop a third generation of plant biostimulants products (biostimulant 3.0) also called functional biostimulants with specific biostimulatory action to render agriculture more sustainable and resilient. The collection invites papers dissecting the biostimulation action of the natural compounds and substances and beneficial microorganisms (AMF and PGPR) on crops grown under optimal and sub-optimal growing conditions.

Collection Editors

Prof. Dr. Youssef Roupael

Department of Agricultural Sciences, University of Naples Federico II,
80055 Portici, Italy

Prof. Dr. Giuseppe Colla

Department of Agriculture and Forest Sciences, University of Tuscia,
01100 Viterbo, Italy



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Agronomy
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agronomy@mdpi.com

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Prof. Dr. Leslie A. Weston

Gulbali Centre for Agriculture, Water and Environment Research,
Charles Sturt University, Wagga Wagga, NSW 2678, Australia

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