

## **ORCA - Online Research @ Cardiff**

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository:https://orca.cardiff.ac.uk/id/eprint/133251/

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Basile, Boris, Andreotti, Carlo, Rogers, Hilary and Rouphael, Youssef 2020. Ushering horticulture into a new era of research-based novelty. Italus Hortus 27 (1)

Publishers page: https://www.soihs.it/italushortus/review\_40\_anno\_2...

## Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See http://orca.cf.ac.uk/policies.html for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



## Ushering horticulture into a new era of research-based novelty Boris Basile1\*, Carlo Andreotti2\*\*, Hilary Rogers3\*\*, Youssef Rouphael1\*\*

- 1 Department of Agricultural Sciences, University of Naples Federico II, Portici (Naples), Italy; boris.basile@unina.it; youssef.rouphael@unina.it
- <sup>2</sup> Faculty of Science and Technology, Free University of Bozen-Bolzano, Bolzano, Italy; carlo.andreotti@unibz.it
- 3 School of Biosciences, Cardiff University, Cardiff, UK; RogersHJ@cardiff.ac.uk
- \* Editor-in-Chief; \*\* Associate Editor

Published: 30 April 2020

Horticulture, as one of the main agricultural pillars, plays a leading role in the 2030 Agenda for Sustainable Development currently adopted by the United Nations. Well-balanced but creative and far-sighted models for the future of the horticultural sector are needed to assure food security, decrease poverty, counteract environmental degradation and combat climate change. During the last few decades, the international horticultural scientific community has produced a large body of research aiming to support the development of this critical agricultural sector. *Italus Hortus (IH)* aims to contribute to this challenging goal, covering all aspects of horticulture where a sciencebased innovation is possible and required. One of these aspects is the definition of innovative cultivation strategies and post-harvest technologies to allow yield stability and quality improvement. The latter includes also the design of cultivation models that by increasing the resilience of the horticultural crops, can mitigate the impact of climate change on the quantitative and qualitative yield performance of the cultivations. At the same time, horticulture will become one of the main actors of a more circular and climate-neutral economy. Increasing attention will be given to the study of cultivation strategies that can help to reduce soil degradation, and the negative effects of current horticultural management on the environment (smart and efficient use of the required inputs, introduction of environmentally-friendly biodegradable plastics, etc.). Some of these goals will be also achieved by increasing the technological level of agriculture including integrating modeling, proximal/remote sensing, mechanization/automation/robotics, mapping, geomatics, decision making, and/or statistics to define a more precise and smart horticulture. In addition, our scientific community will play a major role in supporting the research of innovative cropping systems, such as vertical farming and other solutions useful for the development of urban greening/agriculture (vertical gardens) and/or space farming.

As new Editors of *Italus Hortus*, we are fully aware of the large volume of new science-based insights that the horticultural sector is eager for. We are enthusiastically committed to facilitating its dissemination and we will work to make *Italus Hortus* play a significant role in defining the horticulture of the future. We would like to take this opportunity to thank the former Editor-inchief, Prof. Paolo Inglese, the former and current Editorial Boards, and all the paper authors and reviewers for the outstanding job they have done so far or they will do in the future.