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Editorial

Ecological horticulture: Charting a resilient future for our discipline

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Horticultural science is undergoing a gradual transition from a predominant focus on yield optimization and aesthetic traits towards a more integrated and ecologically informed approach. This shift reflects the increasing recognition of the sector's role in addressing complex global challenges, including the impacts of climate change, biodiversity decline, and the depletion of critical natural resources. The ongoing degradation of ecosystems poses risks to both agricultural productivity and the quality of human environments, particularly in urban settings. In response, there is growing interest in developing horticultural systems that balance productivity with environmental sustainability and social relevance. Future progress in the discipline will likely depend on the capacity to design and implement solutions that are both technically effective and aligned with broader ecological and societal goals.

As the official journal of a scientific society, *Italus Hortus* operates with a mission distinct from that of purely commercial publishers. Our primary objective is to serve the horticultural science community, which allows us to prioritize scientific value over profitability or the strict adherence to quantitative metrics. We continue to receive a steady volume of submissions, and our rigorous review process results in a discerning acceptance rate of approximately 55%. This figure reflects a careful selection process, with a substantial portion of manuscripts declined either after peer-review or during initial editorial screening to ensure relevance and quality. In today's competitive publishing environment, we recognize our standing as a Q4 journal. Rather than chasing rapidly shifting metrics, we leverage our position to provide a stable and accessible platform for solid, methodologically sound research. This approach ensures that *Italus Hortus* remains a trusted and reliable resource for the community it is dedicated to serving.

To guide the future direction of *Italus Hortus*, we conducted a bibliometric analysis of all articles published from 2000 to 2024. This exercise was a strategic assessment to understand the thematic evolution of our journal. The analysis reveals four distinct but interconnected research pillars: a strong core in fruit quality and physiology (Red); a vital focus on environmental interactions and climate change (Green); foundational work in genetics and production systems (Blue); and an emerging cluster centered on high-level challenges like sustainability and disease (Yellow) (Figure 1). The strong links between these clusters demonstrate that our journal is already a hub for interdisciplinary science, where fundamental research on crop biology meets applied solutions for real-world problems.

The network was generated using VOSviewer software based on the analysis of titles and abstracts. Each node represents a term, and the size of the node is proportional to its frequency of occurrence. The lines connecting the nodes indicate that the words appeared together in the analyzed documents; thicker lines represent a stronger co-occurrence link. The analysis identified four main research clusters, which are indicated by different colors: Cluster 1 (Red): Focuses on fruit physiology, biochemistry, and quality attributes (e.g., 'fruit quality', 'sweet cherry', 'polyphenol', 'firmness'). Cluster 2 (Green): Relates to

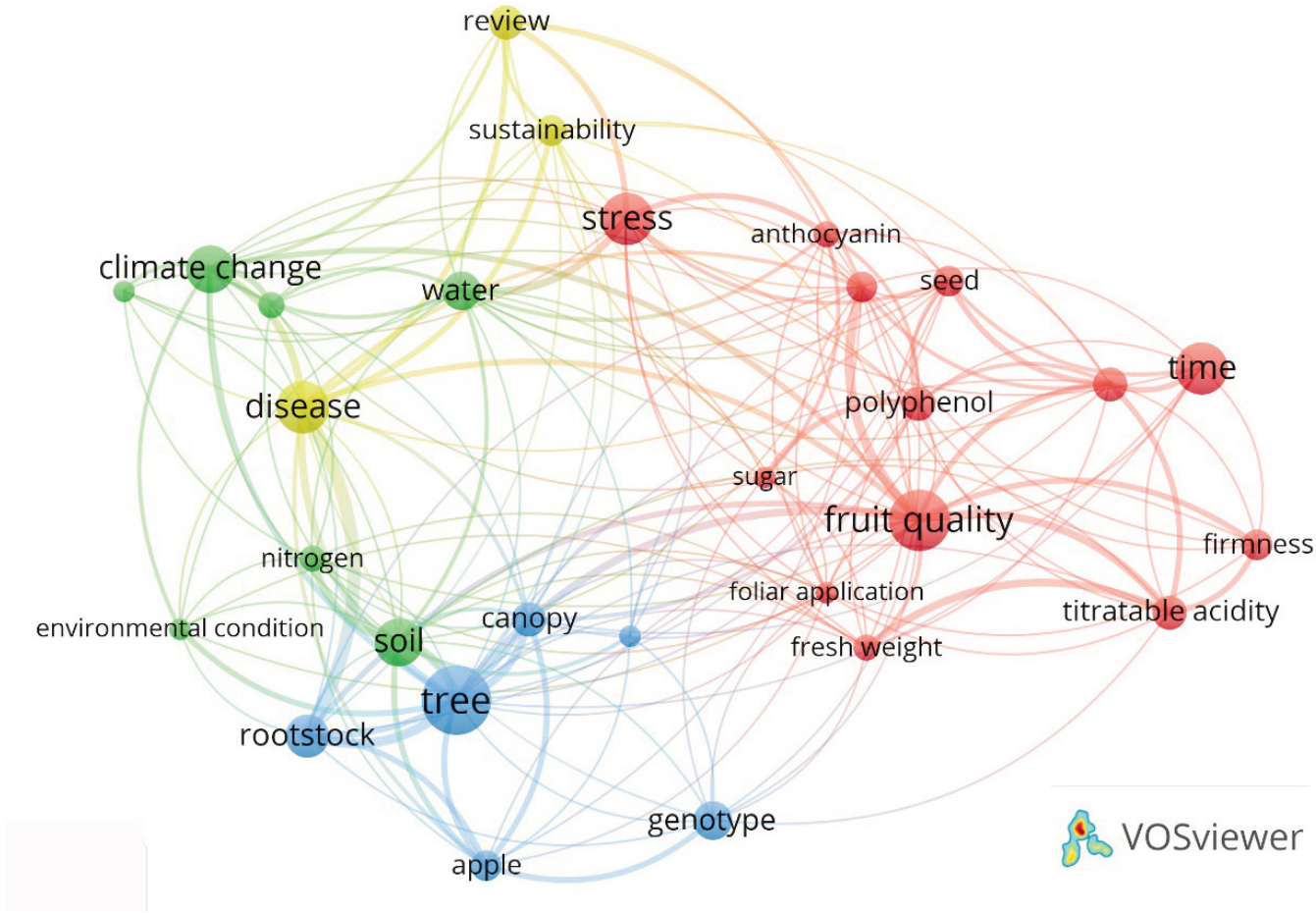

Figure 1. Bibliometric map of term co-occurrence from publications in *Italus Hortus* (2000-2024).

agronomy, environmental factors, and ecophysiology (e.g., 'climate change', 'soil', 'water', 'plant growth'). Cluster 3 (Blue): Concerns genetics, breeding, and orchard/crop management systems (e.g., 'genotype', 'rootstock', 'canopy', 'apple'). Cluster 4 (Yellow): Represents overarching research themes and methodologies (e.g., 'sustainability', 'disease', 'review').

Building on this established foundation, *Italus Hortus* will now place a strategic focus on research that advances the field of Ecological Horticulture. This systems-based approach aligns horticultural practice with ecological processes and local biodiversity. It emphasizes the use of native species, traditional landraces, and biodiversity-oriented design principles to promote more resilient and sustainable systems. By reducing dependence on resource-intensive monocultures and instead utilizing plant species adapted to local climatic and edaphic conditions, Ecological Horticulture seeks to develop systems that are both ecologically functional and less reliant on external inputs**.** There is growing interest, for example, in the potential role of native plant species and traditional landraces in enhancing the resilience of horticultural systems. While it is suggested that these plants may exhibit greater tolerance to local stressors, empirical evidence remains limited. We encourage research that systematically evaluates the ecological performance and agronomic traits of native and locally adapted varieties, particularly in comparison to contemporary cultivars, to inform the development of more sustainable and regionally adapted practices. In urban contexts, the principles of Ecological Horticulture are increasingly applied through the development of multifunctional "green landscapes". Interventions such as rooftop gardens, living walls, and community green spaces are gaining recognition for their potential to support climate change adaptation by alleviating urban heat island effects, enhancing air quality, and creating ecological corridors. Furthermore, such interventions are associated with improved psychological well-being and social

cohesion. We welcome research that quantifies these effects to inform scalable, evidence-based urban greening strategies.

To support this vision and accelerate the dissemination of such important work, we are implementing two key initiatives. First, we are excited to announce that *Italus Hortus* is transitioning to a continuous publishing model. Effective immediately, all accepted articles will be published online in their final, citable form as soon as they are ready, ensuring that research reaches the community without the delays associated with traditional issue-based publishing. As a second key step, we are proud to launch our first-ever Special Issue: "Cultivating Innovation: Emerging Challenges and Solutions in Viticulture". This topic bridges the journal's traditional strengths with the forward-looking paradigm of sustainable production, serving as a flagship for the kind of integrative research we aim to foster. We invite researchers to contribute their work to this important collection, with a submission deadline of 30 November 2025.

Finally, we extend our deepest gratitude to the authors and reviewers whose work contributes to the growing reputation of the journal. You have defined the identity of *Italus Hortus*, and with this clearer understanding of our collective achievements, we are better equipped to guide the journal into a future where we foster a more sustainable and biodiverse world for generations to come.