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Chronica Horticulturae



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News & views from the Board

The new Board of the ISHS • Introduction to the Chairs of Divisions for the term 2026-2030 • ISHS Awards bestowed • It's time to get off the hamster wheel

Symposia and workshops

Postharvest Pathology • Almonds and Pistachios • Southeastern and Eastern Europe Vegetables and Potatoes • Processing Tomato • Asparagus • Powering the future of sustainable horticulture: science × industry • UrbanFarm2026 – International Student Challenge

Chronica Horticulturae



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Acta Horticulturae is the series of proceedings of ISHS Scientific Meetings, Symposia or Congresses (ISSN 2406-6168 electronic). ISHS Members are entitled to a substantial discount on the price of *Acta Horticulturae*. A complete and accurate record of the entire *Acta Horticulturae* collection, including all abstracts and full text articles, is available online at www.actahort.org. ISHS Individual Membership includes credits to download 20 full text *Acta Horticulturae* articles. All *Acta Horticulturae* titles are available in the electronic e-*Acta Horticulturae* online format.

eJHS

eJHS (*European Journal of Horticultural Science*) is the official journal of the International Society for Horticultural Science. eJHS is an open access journal publishing significant plant science discoveries and new or modified methodologies and technologies with a broad international and cross-disciplinary interest in the scope of global horticulture. The journal scope covers both applied and fundamental aspects of the entire food value chain, including breeding, production, processing, trading and retailing of horticultural crops and commodities grown in temperate, Mediterranean, tropical and subtropical climates. Additional information can be found at www.ishs.org/ejhs

Scripta Horticulturae

Scripta Horticulturae is a series from ISHS devoted to specific horticultural issues such as position papers, crop or technology monographs and special workshops or conferences.

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Cover photograph: A pistachio cluster of 'Kaleghouchi', a cultivar renowned for its large nut size. Courtesy of Giulia Marino. See article p.36.



> From the cockpit

Peter J. Batt, Editor, *Chronica Horticulturae*



> Peter J. Batt

Every four years, the members of our Society congregate for the International Horticultural Congress (IHC). This past August, we met for the 32nd time in Kyoto, Japan, for an event that was absolutely magnificent. Thank you Prof. Ryutaro Tao and thank you Team Japan for being such gracious hosts. While we will provide a detailed report of the congress in the December issue of *Chronica Horticulturae*, the timing of the IHC also coincides with the official appointment of the new President, the new Board, the duly elected Division Chairs and the conferring of the ISHS awards for our new Fellows and Honorary Members, and the Horticulture Innovation Awards.

This edition of *Chronica Horticulturae* begins with a statement from our President, Dr. François Laurens, who in being elected for a second consecutive term, outlines some of the most urgent priorities he and the new Board wish to accomplish. Accompanying him on that journey are some familiar faces: Ted DeJong, representing North America (including Caribbean and Central America); Lukas Bertschinger, representing Europe; Moctar Fall, representing Africa; and Peter Vanderborght, ISHS Executive Director and *ex officio* Board member. However, there are four new faces on the Board: Denise Yi-Tan Fang, from Taiwan, representing Asia; Renato Paiva, from Brazil, representing South America; and Sukhvinder Pal (SP) Singh, from Australia, representing Oceania. *Ex officio*, Massimo Tagliavini, President of IHC2030, also joins the Board.

The activities of ISHS are fundamentally built around the 30+ symposia that are conducted on an annual basis, somewhere in the world, and the subsequent publication of those proceedings in *Acta Horticulturae*. Guiding that process are our 14 elected Division Chairs and the Chair of a new special Division for our Young Minds. Collectively, these guys and girls comprise our Executive Committee. In the article that follows, we introduce each of them.

Finally, it is with great pleasure that I introduce you to each of our new Fellows, Hon-

orary Members and the two recipients of our Horticulture Innovation Awards. Over the coming months, you'll get to know a lot more about these people through featured articles in section "Spotlight on Honoured ISHS Members" in *Chronica Horticulturae*.

For IHC2026, there were 27 symposia and a number of special sessions and workshops. For each symposium, the winners of the best oral and poster presentations by our young and emerging members were given Young Minds Awards. In this edition, we feature some of those winners. From Australia, Anuruddhika Udayangani Rathnayake examined the impact of plant-based dairy milk alternatives, with or without strawberries, on gut health. Staying with nutrition and health, Greshen Garcia investigated the nutraceutical traits in *Brassica oleracea* L. for functional food production, while Kota Higuchi looked at how, through improved methods of fruit processing, additional health benefits might be obtained from Chinese quince (*Pseudocydonia sinensis*). In PFALs, Marisa Lourenço looked at targeted light treatments as a strategy to boost anticancer alkaloid accumulation in *Catharanthus roseus*. Masaru Homma compared the results achieved from modelling the intercepted light in the plant canopy using the Monsi-Saeki theory and visual imaging from 3D cameras for sweet pepper, tomato and strawberry crops. In pursuing greater sustainability, Marko Bjeljic investigated an integrated approach to improve the monitoring of *Drosophila suzukii*, an important pest of soft and stone fruits, while Donata Arena investigated the use of *Moringa* leaf extracts as natural biostimulants in baby-leaf production. In the area of plant breeding, Jung-Min Kim used CRISPR/Cas9 to validate the transcriptome-derived candidate genes for capsaicinoid accumulation in *Capsicum annum*.

While traditionally, far fewer symposia are conducted in the same year as the IHC is held, a number of other symposia were conducted in 2026. Among the Young Minds Award winners from those symposia were Salome

Ayekpuo Arewa, who explored how the timing of transplanting windows impacted the incidence of tomato pin worm in commercial tomato processing crops in northern Nigeria. In parallel, Nazmin Akter reported on the development of practical and sustainable stress-hardening strategies to improve transplant resilience and crop establishment in tomato processing crops. Ovidia Agapie investigated the effects of cold plasma treatment on seed germination and early seedling development in beans (*Phaseolus vulgaris*), while Asmita Nagila evaluated two root-centered strategies for improving pepper crops under organic production conditions. In seeking to reduce the need for chemicals, Giulia Remolif examined a cost-effective culture medium for the mass production of an endophytic antagonistic strain of *Aureobasidium pullulans* for the biological control of *Colletotrichum* sp. and *Botrytis cinerea*. Finally, Carlota Bernal Basurco explored the effects of irrigation on the reproductive shoots carrying fruit clusters and on vegetative, non-bearing shoots, during kernel filling and ripening for pistachio.

Ted DeJong, our past Vice-President in charge of scientific programs, makes a passionate plea to all ISHS members to consider publishing articles in *eJHS* (*European Journal of Horticultural Science*), the official journal of ISHS, which from 1 January 2027 will be known as the *Journal of the International Society for Horticultural Science* (JISHS). Ted argues that the emergence of an impact factor has decreased the importance of a journal's affiliation with a reputable society or association. In parallel, and with the emergence of more online scientific publishers, members are providing their time for free as an integral part of the peer-review process. Rather than donating their time to other 'for profit' online publishers, Ted argues that we would all be better off by publishing through a member-run scientific society that provides value back to its members. In this respect, as Editor of *Chronica Horticulturae*, I hope that I too am providing something of value to you, our members. 🍋

> Looking back with a vision for the future



> François Laurens

François Laurens, President of ISHS

I would like to begin by sincerely thanking the ISHS Council for the confidence it has placed in me through its unanimous decision to renew my mandate as President for another four years. I am honored by this renewed trust and excited about the opportunity to continue serving our Society during what promises to be a challenging and important period for horticultural science and for ISHS itself.

Before thinking about what lies ahead, I would like to express my heartfelt appreciation to the former Board for everything we have accomplished together. I have been fortunate to work alongside a motivated, committed, and highly dedicated team whose efforts have helped ISHS evolve and adapt to a rapidly changing world and its many challenges. I would also like to thank the Secretariat, which has worked tirelessly to turn our decisions into actions.

Over the past years, our achievements have included strengthening our scientific activities, enhancing communication with our members, implementing our publication strategy through a partnership with CABI, and expanding initiatives dedicated to supporting our Young Minds. A more detailed overview of what has been accomplished can be found in the Biennial Report to Members recently published in *Chronica*

Horticulturae 66 (2), 4-8 (<https://ishs.org/chronica-horticulturae/vol66nr2/>).

Over the next four years, one of my most urgent priorities will be the implementation and consolidation of the business plan developed during the previous mandate. While considerable work has already been done, we were unable to fully implement it within the available timeframe. We must continue to grow our membership while diversifying our sources of revenue to ensure the long-term sustainability and independence of our Society.

In the coming months, particular attention will need to be given to *Acta Horticulturae*, which remains one of ISHS's greatest assets and one of our major sources of revenue. We must make *Acta* even more attractive and relevant, while adapting it to the rapidly evolving landscape of scientific publishing.

Another priority will be to strengthen the visibility and promotion of our events, and to reinforce our collaboration with conveners. We want to support them whenever necessary, while ensuring that all ISHS events continue to meet the highest standards of scientific quality and remain aligned with our ESG principles and values. At the same time, we should not forget that our symposia and congresses are also about bringing people together. Beyond scientific exchange,

they provide valuable opportunities to build professional networks, foster collaborations, experience different cultures, and discover new regions and production environments. Preserving and promoting this human and social dimension is essential to the continued success and attractiveness of ISHS events.

We must also continue our efforts to rejuvenate ISHS. The initiatives launched in recent years for Young Minds have already produced encouraging results, but much remains to be done. Engaging the next generation of horticultural scientists and professionals will be essential for the future of our Society.

At the same time, we will continue improving the way the Board and the Secretariat work together so that decisions can be implemented more efficiently and effectively for the benefit of our members.

ISHS does not belong to its President, its Board, or its Secretariat. It belongs to all of us. Our Society is a collective endeavour built by its members, and its future depends on our shared commitment to strengthening and advancing it together. Please do not hesitate to contact me with your ideas, suggestions, expectations or concerns.

Thank you once again for your confidence, your support and your continued contribution to ISHS. ●



> Did you renew your ISHS membership?

Lagon to www.ishs.org/members and renew online!

> The new Board of the ISHS



> The new Board members at IHC2026.

On 26 August 2026, at the ISHS Members' Forum at IHC2026 in Kyoto, Japan, the ISHS members in attendance confirmed and inaugurated the new Board of the ISHS. As

described in the Statutes and in the Rules of Procedure of the Society, the Board is composed of not less than five, nor more than nine, elected members and two *ex officio*

members. While the new Board took the opportunity to meet with the new Executive Committee in Kyoto, portfolios for incoming Board members have yet to be assigned.

Dr. François Laurens, President and Chairperson of the Board

For the last 30 years, Dr. François Laurens has worked at INRAE Angers (France) as a geneticist and a plant breeder in charge of many diverse projects including the French fruit varietal testing network, apple and pear breeding programs, apple germplasm management, and fruit quality genetic studies. He is a member of the Executive Committee of the Institute of Research on Horticulture and Seeds (IRHS), a large laboratory with 250 members developing research projects on quality and health of horticultural crops based in Angers. He is also the leader of the Vadipom team, which, with around 15 people, is working on the valorization of the diversity of pip-fruits. His team has released more than 20 apple and pear cultivars, including the apple cultivar 'Inored Story®'. This cultivar has good resistance against scab, very attractive fruit with good eating characteristics, and high and consis-

tent yields. With more than 7 million trees planted, 'Inored' is among the most planted new scab resistant cultivars in the world. Between 2011 and 2015, he coordinated the European project FruitBreedomics, bringing together 28 partners to improve the efficiency of apple and peach breeding by bridging the gap between basic research and applied breeding. He also led the Friendly Fruit project (2018-2020), which developed and tested environmentally friendly practices for apple and strawberry production. More recently, he coordinated the EU-H2020 INVITE project (2019-2024), involving 29 partners and more than 200 participants from research organizations, examination offices and seed companies across Europe. The project aimed to accelerate the introduction of cultivars better adapted to climate change and sustainable crop management. Its outcomes are already being implemented in official DUS



> François Laurens

variety testing. He is also an active member of the Board of EUFRIN (European Fruit Research Institutes Network). François is also the leader of GIS Fruits, a scientific interest group that draws together 22 French partners involved in research and training in the fruit sector. He is an active member of numerous scientific committees at both national and international levels. He is currently the President of the Scientific Committee of CTIFL (French Technical Center for Fruit and Vegetables) and the National Fruit and Vegetable Sovereignty Plan.

Prof. Dr. Ted M. DeJong

Professor Ted M. DeJong is an emeritus professor who worked as a fruit tree crop physiologist in the Department of Plant Sciences at the University of California, Davis, USA, from 1981 to 2016. He had a split appointment in teaching, fundamental and application-oriented research, and extension. He served as chair of the UC Davis Department of Pomology for eight years (1994-2002) and as vice-chair in the reorganized/consolidated Department of Plant Sciences for three years (2006-2009).

His research program mainly focused on understanding tree physiology and orchard management factors that control the carbon balance/budgets and productivity of fruit and nut trees. He has co-authored more than 250 scientific papers, taught fundamental pomology courses and mentored numer-

ous graduate students, postdocs and visiting international scientists. He received the title of Distinguished Professor at UC Davis in recognition of his academic achievements and service. Dr. DeJong is a Fellow of the International Society for Horticultural Science and of the American Society of Horticultural Science and is a member of several ISHS Working Groups. He has chaired or co-chaired three ISHS symposia and served as Vice-Chair (2004-2010) and Chair (2014-2018) of ISHS Section Pome and Stone Fruits and Chair of ISHS Division Temperate Tree Fruits (2018-2022). Professor DeJong was first elected to the Board as the representative for North America (including Caribbean and Central America) for the 2022-2026 term where he served as Vice-President in charge of scientific programs.

He was President of the XXXI International Horticultural Congress (IHC2022), which was held in Angers, France, and was elected President of ISHS in August 2022. He will continue in that role for the 2026-2030 term, thereby providing the continuity of leadership that is desirable for the implementation and consolidation of the many strategies developed during his previous mandate. François and his wife Catherine have three children, Marion, Quentin and Paul, and two grandchildren.



> Ted M. DeJong

Dr. Denise Yi-Tan Fang

Dr. Denise Yi-Tan Fang is a leading Taiwanese horticulturist with nearly 30 years of public service and research leadership. She began her professional career at the World Vegetable Center (formerly Asian Vegetable Research and Development Center). After passing the Civil Service Examination, she joined the Agriculture and Food Agency under the Council of Agriculture (now Ministry of Agriculture). Rising through the ranks as Junior Specialist, Specialist, Senior Specialist, and Section Chief, she ultimately served as Director of the Crop Production Division from 2015 to 2018.

Throughout her long career, Dr. Fang has dedicated herself to modernizing horticulture in Taiwan. By promoting protected cultivation systems and establishing reliable supply chains, she has successfully connected smallholder growers to global markets. She introduced key Taiwanese crops – including orchids, edamame and lychees – to international markets by enhancing postharvest and cold chain management and facilitating

improved quarantine processes for agricultural produce.

In 2015, Dr. Fang represented the Council of Agriculture in discussions with the Community Plant Variety Office (CPVO) regarding the takeover of Distinctness, Uniformity and Stability (DUS) reports for the registration of plant variety rights for *Phalaenopsis* orchids. In 2019, a Memorandum of Understanding (MOU) was formally signed, which shortened the examination period for *Phalaenopsis* variety rights and reduced associated costs in Europe. This initiative also contributed to the vigorous development of research aimed at building capacity for *Phalaenopsis* variety testing and examination.

Her work on pineapple exports is particularly notable. In 2025, she won the National Agricultural Science Award for developing a new pest management and preservation technology for exported pineapples. Due to the high soluble solids content of 'Tainung No. 17', Taiwan's primary export pineapple cultivar, the fruit is particularly susceptible to stem-end

rot and cut-surface decay. This breakthrough technology successfully reduced quarantine pests and chemical fumigation, and effectively resolved fruit decay issues during long-distance maritime transportation.



> Denise Yi-Tan Fang

Dr. Fang later served as Secretary General of the Taiwan Agricultural Research Institute (TARI) from 2018 to 2023, and as Director of TARI's Chiayi Branch (2023-2025). She is currently the Vice-President of the Agricultural Technology Research Institute (ATRI), where she focuses on commercializing agricultural

innovations. Since 2023, she has served as President of the Taiwan Society for Horticultural Science (TSHS). She has devoted herself to promoting international collaboration and has actively worked to build professional development networks for young horticultural scientists in Taiwan.

Dr. Fang has served as the national representative for Chinese Taipei on the ISHS Council since 2016.

In August 2026, Dr. Fang was elected to the ISHS Board as the representative for Asia.

Dr. Lukas Bertschinger

Dr. Lukas Bertschinger is the founder and acting manager of *klb innovation* (food system innovation and expertise) in Switzerland, co-founder and chair of the Müller-Thurgau Foundation, co-founder and advisor to the viticulture center Wädenswil Ltd, and chair of the scientific advisory board of the Laimburg Research Center in South Tyrol.

Lukas is a passionate supporter of science-based innovation for sustainable food systems, including horticulture. He is an institution builder with experience in the public and private sector and advocates for the comparative advantages of horticulture to other agri-food sectors in response to the imminent challenges facing the global food system, including the healthy nutrition imperative, biodiversity loss, resource waste, and value creation. His work is guided by his desire to strengthen value creation of farm-based agri-food value chains with ecologically sound, competitive methods and cultivars. Lukas has built his knowledge and extensive network through prior engagements with the International Potato Center (CIP, Lima), the International Wheat and Maize Improvement Center (CIMMYT, Mexico), followed by Agroscope (Swiss public agri-food sector research) focusing on horticulture, as a scientist, departmental head, research director and programme

leader. More recently, he has engaged with the private sector to facilitate business-based innovation opportunities.

Aside from his experience as a fruit tree, vegetable and wine grape researcher, Lukas has extensive experience in institution building, public-private partnerships, as well as research strategy development and governance of research institutions. He has served on the boards of several international platforms, including the International Center for Insect Physiology and Ecology (*icipe*) in Nairobi, where he was a Council member and Chair. *icipe* honored his contributions to strengthening good governance, core donor ties, impact-orientation and effective management procedures with an *icipe* achievement award. Lukas was part of the core group to develop a strategy for the European Fruit Research Institutes Network (EUFRIN) and the recently founded alliance for fruit and vegetable production and viticulture of institutions in the German speaking part of Europe. He has also contributed to several EU-projects in fruit research.

Lukas has been an ISHS member since 1995, serving as the Council member for Switzerland from 2002 to 2019. He has been a co-convenor of nine symposia, delivered invited talks at several International Horticultural Congresses



> Lukas Bertschinger

(IHC), and was a co-creator of the International Symposium on Horticulture in Europe (currently the European Horticultural Congress). Lukas was first elected to the ISHS Board as the representative for Europe for the 2022-2026 term, where, with a focus on finance, expanding memberships and strengthening outreach, he served as Treasurer.

Lukas and his wife Luzia have three adult children, David, Mona and Rahel.

Mr. Moctar Fall

Mr. Moctar Fall is Founder and Chair of Agroseed and Hortisol agricultural fair-trade companies in Senegal. These companies deliver goods and services to smallholder growers as well as agri-business in Senegal and the West Africa sub-region. Mr. Fall is an international, independent expert, trainer, and consultant on environment and development issues. He is a founder and a former Board member of the World Fair Trade Organization (WFTO). Moctar contributed significantly to promoting and expanding fair trade in Africa and in building up the Sustainable Fair Trade Management System (SFTMS). For 16 years, he was a trade negotiator for Senegal, the West African Economic and Monetary Union (WAEMU), and the Economic Community of West African States (ECOWAS). He worked on the World Trade Organization (WTO), United

Nations Conference on Trade and Development (UNCTAD), and the African, Caribbean and Pacific-European Union (ACP-EU) multilateral trade agreements. For his services, Moctar has been awarded the rank of Officer of the Ordre du Merite Agricole Français.

Moctar has been a lecturer at Reims University (France) and Dakar University (Senegal). He currently chairs the Board of the Senegalese Horticulture Cluster Association and was the Senegal Council representative for ISHS until 2022. He convened the IV All Africa Horticultural Congress (AAHC), which was held virtually in Dakar in 2021. Moctar was first elected to the ISHS Board as the representative for Africa for the 2022-2026 term, where he was responsible for partnerships with industry, institutions and NGOs, and served as Secretary.



> Moctar Fall

Prof. Renato Paiva

Dr. Renato Paiva is a full professor at the Federal University of Lavras, Brazil, in the Biology Department, where he started in 1993. He teaches courses in plant physiology for both graduate and undergraduate students and has research interests in plant micropropagation and in vitro conservation through cryopreservation. To date, he has supervised 49 MS, 31 PhD students and 7 Post-Docs. He has published more than 200 peer-refereed scientific papers, authored a book on Plant Physiology and Production and co-authored multiple book chapters. Professor Paiva has served as President of the Brazilian Association of Plant Tissue Culture (ABCTP) for two consecutive four-year terms and was President of the First Brazilian Congress of Plant Tissue Culture, which is now in its thirteenth edition. He previously served as Head of the Department of Biology from 2000 to 2004 and recently returned to the role for a second four-year term beginning in 2024.

For the past 20 years, Renato has been actively involved with scientific communica-

tions, first as Editor-in-Chief of the Brazilian scientific journal, *Ciência e Agrotecnologia* (Science and Agrotechnology) since 2006, and more recently as Director of UFLA's publishing house. Currently, he is a member of the Latin America Scientific Electronic Library Online (SciELO Brazil) Consultative Committee, representing editors of agricultural journals as well as the Brazilian Association of Scientific Editors (ABEC).

Having joined ISHS in 2012, he has been actively engaged in many ISHS activities. In addition to serving as an ISHS Council member representing Brazil, he has participated in numerous symposia. He was convener of the VII International Symposium on Production and Establishment of Micropropagated Plants in Lavras, Brazil (2017), and co-convener of the International Symposium on Beverage Crops, held in Cairns, Australia (2016). Due to his extensive involvement and experience with scientific publications, he was appointed Editor-in-Chief of the *European Journal of Horticultural Science* (eJHS), the official scientific journal of ISHS, in February



> Renato Paiva

2024. In August 2026, Professor Paiva was elected to the ISHS Board as the representative for South America. He shares his career success with his wife, Patricia, and their three children, Alice, Elisa, and Gabriel.

Dr. Sukhvinder Pal (SP) Singh

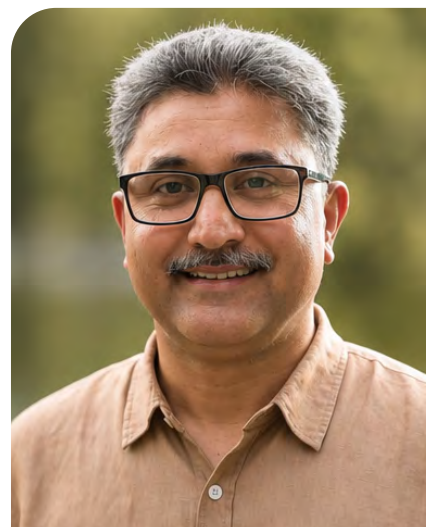
Dr. Sukhvinder Pal (SP) Singh is Senior Research Scientist with the New South Wales Department of Primary Industries and Regional Development (NSW DPIRD) in Sydney, Australia. Since February 2020, he has also served as Institute Director of the NSW DPIRD Central Coast Primary Industries Centre, combining scientific leadership with organisational oversight. His public sector research activities have been complemented by academic appointments at The University of Newcastle, Australia, where he served as Conjoint Lecturer and Senior Lecturer between 2015 and 2023 and as an adjunct associate professor since 2024.

SP's research focuses primarily on fresh produce safety across preharvest and post-harvest systems, with the overarching goal of enhancing consumer confidence in fresh produce supply chains, ultimately leading to increased consumption of fresh fruit and vegetables. He has successfully secured more than AUD 15 million in R&D funding from industry, state and federal sources. His research has been nationally and internationally recognized. For his contributions to the industry and the tangible impact of his research, SP was awarded Researcher of the Year by Hort Connections - Nation-

al Awards of Excellence in 2026. In addition, he has received a Food Safety Award (2025) and Minister's Award (2018), together with several commendations and honors from government, industry and regulatory organisations.

Over many years, SP has demonstrated a longstanding commitment to the Australian Society of Horticultural Science (AuSHS), which he joined in 2006. He served on its National Management Committee from 2014 to 2018, followed by service as Treasurer and Executive Committee Member from 2018 to 2024. Since 2024, he has served as a Director of AuSHS. He currently leads the AuSHS Future of Hort Science initiative, the Society's largest capacity-building program, which aligns closely with the ISHS Young Minds initiative.

SP's association with ISHS first began in 2004, when he joined as a student member. Over more than two decades, he has sustained engagement and service to ISHS through scientific committees, symposia and other international scientific activities. In 2022, he was elected Vice-Chair of ISHS Division Postharvest and Quality Assurance (DPHQ). In the same year, he became Australia's representative on the ISHS Council, providing



> Sukhvinder Pal (SP) Singh

an important link between ISHS and the Australian horticultural science community. In 2026, he was re-elected as Vice-Chair of DPHQ, reflecting his continued commitment to the Division and ISHS.

In August 2026, SP was elected to the ISHS Board as the representative for Oceania.

Prof. Dr. Massimo Tagliavini, President of IHC2030, *ex officio* Board member

Professor Massimo Tagliavini is a full professor at the Free University of Bozen-Bolzano, Italy. Throughout his academic career, he has taught and supervised master and PhD students in the fields of agricultural ecology, crop production, tree biology and management, horticultural research methods, and agroecosystem science.

Massimo served as Dean of the Faculty of Science and Technology from 2008 to 2014 and has coordinated the doctoral programme in Mountain Environment and Agriculture since 2019. Since 2016, he has served as Vice-President of Eurac Research, one of Europe's leading research institutions focused on mountain environments and regional development. He was President of the Italian Society for Horticultural Science from 2016 to 2022 and President of the Italian Association of Agricultural Scientific Societies from 2020 to 2023. Within the International Society for Horticultural Science (ISHS), he served two terms as Chair of the Working Group Mineral Nutrition of Fruit Crops.

Massimo has authored or co-authored more than 200 scientific publications and has been an invited keynote speaker at numerous national and international conferences. He has contributed extensively to scientific publishing, serving as Editor of *Italus Hortus*, the official journal of the Italian Society for Horticultural Science, and as a member of the Editorial Advisory Boards of the *European Journal of Agronomy* and *Tree Physiology*.

Throughout his career, Massimo has actively promoted scientific exchange through the organization of national and international conferences and symposia. He convened or co-organized several ISHS and horticultural science meetings, including the International Symposium on Foliar Nutrition of Perennial Fruit Plants, the VIII International Symposium on Mineral Nutrition of Fruit Crops, and the XI Congress of the Italian Society for Horticultural Science.

A long-standing member of ISHS, Massimo has participated in numerous ISHS symposia and scientific activities over more than three



› Massimo Tagliavini

decades. He currently serves as President of the XXXIII International Horticultural Congress (IHC2030), which will be held in Milan, Italy. As President of IHC2030, he joins the ISHS Board as an *ex officio* member.

Mr. Peter Vanderborght, Executive Director, *ex officio* Board member

Mr. Peter Vanderborght is a certified accountant and tax consultant who began his career as an auditor with Ernst & Young in Brussels, Belgium. In 1993, he joined the International Society for Horticultural Science (ISHS) and took on the challenge of restructuring and streamlining the management of the ISHS office, implementing improved accounting and financial administration procedures, and setting up an appropriate IT environment to efficiently facilitate the anticipated growth in membership and publishing-related activities.

In the early 1990s, Peter identified the emerging importance of rapid changes taking place in the field of information technology and the 'World Wide Web'. His vision materialized in the implementation of an ISHS publications scanning and digitizing project, converting the entire back catalogue of *Acta Horticulturae* from print to a full-text searchable electronic format. This new digital *Acta Horticulturae* catalogue he created, allowed *Acta Horticulturae* papers to become accessible to researchers all over the world.

Over the past 33 years with ISHS, Peter has served in a variety of key positions, gaining extensive experience and a deep understanding of ISHS' mission, operations and global community. In recognition of his longstanding commitment and expertise, he was nominated by the ISHS Board and subsequently appointed by the ISHS Council as Executive Director, in January 2019. Supported by a dedicated and highly professional team at the ISHS Secretariat, and working closely with the ISHS Board, he successfully guided the Society through the COVID-19 pandemic. Throughout his career, Peter has consistently adopted a pragmatic approach in managing the affairs of ISHS through proactive planning and prudent stewardship of the Society's resources. Over the last eight years, Peter has played a pivotal role in strengthening the resilience of ISHS and supporting the Board in navigating an increasingly dynamic and competitive global landscape.

Peter lives in Leuven, Belgium, with his wife, Véronique, and their daughter Sofie. ●



› Peter Vanderborght

➤ Introduction to the Chairs of Divisions for the term 2026-2030

Division Greenhouse and Indoor Production Horticulture	Chair: Prof. Dr. Nazim S. Gruda (Germany) Vice-Chair: Dr. Giedrė Samuolienė (Lithuania)
Division Horticulture for Human Health	Chair: Assoc. Prof. Tim O'Hare (Australia) Vice-Chair: Dr. Luca Mazzoni (Italy)
Division Landscape and Urban Horticulture	Chair: Prof. Dr. John Mwibanda Wesonga (Kenya) Vice-Chair: Dr. Angeliki Paraskevopoulou (Greece)
Division Ornamental Plants	Chair: Prof. Dr. Patricia Duarte de Oliveira Paiva (Brazil) Vice-Chair: Dr. Margherita Beruto (Italy)
Division Plant Genetic Resources, Breeding and Biotechnology	Chair: Dr. Sandra Correia (Portugal) Vice-Chair: Dr. Lorenzo Burgos (Spain)
Division Plant-Environment Interactions in Field Systems	Chair: Prof. Dr. Stefano Musacchi (USA) Vice-Chair: Dr. Mehdi Sharifi (Canada)
Division Postharvest and Quality Assurance	Chair: Prof. Giancarlo Colelli (Italy) Vice-Chair: Dr. Sukhvinder Pal (SP) Singh (Australia)
Division Precision Horticulture and Engineering	Chair: Prof. In-Bok Lee (Republic of Korea) Vice-Chair: Dr. Hicham Fatnassi (France)
Division Sustaining Horticulture in a Changing World	Chair: Dr. Melinda J. Knuth (USA) Vice-Chair: Prof. Dr. Maria Claudia Dussi (Argentina)
Division Temperate Tree Fruits	Chair: Prof. Luca Corelli Grappadelli (Italy) Vice-Chair: Prof. George Manganaris (Cyprus)
Division Temperate Tree Nuts	Chair: Dr. Giulia Marino (USA) Vice-Chair: Dr. Maria Jose Rubio Cabetas (Spain)
Division Tropical and Subtropical Fruit and Nuts	Chair: Dr. Nicolas Roux (France) Vice-Chair: Dr. Sangram Dhumal (India)
Division Vegetables, Roots and Tubers	Chair: Prof. Dr. Ferdinando Branca (Italy) Vice-Chair: Prof. Dr. Masayoshi Shigyo (Japan)
Division Vine and Berry Fruits	Chair: Prof. Dr. Bruno Mezzetti (Italy) Vice-Chair: Prof. Lisa Wasko DeVetter (USA)
Special Division Young Minds	Chair: Assist. Prof. Chayce Griffith (USA) Vice-Chair: Ms. Winnie Wambugu (Kenya)

Division Greenhouse and Indoor Production Horticulture



➤ Nazim S. Gruda

At the recent ISHS Council meeting in Kyoto, Japan, Professor Dr. Nazim S. Gruda was confirmed as Chair of ISHS Division Greenhouse and Indoor Production Horticulture. He succeeds Professor Youssef Rouphael in this position and will work in close collaboration with Vice-Chair Dr. Giedrė Samuolienė (Lithuania).

Professor Gruda, University of Bonn, Germany, received his doctorate from the Technische Universität München (TUM) and his habilitation from the Humboldt-Universität zu Berlin, Germany. For more than four decades, his research has focused on controlled environment agriculture, soilless culture, produce quality, and climate-smart agriculture. He has served as a visiting scientist at several international institutions in Ireland, the USA and Spain, and authored nearly 450 scientific and technical publications, including over 200 peer-reviewed journal articles, and 40 books and book chapters. He has been consistently ranked among the top 2% of the most influential scientists worldwide by Stanford for several consecutive years.

Professor Gruda has been actively involved in ISHS for many years. He served as Vice-Chair of ISHS Division Vegetables, Roots and Tubers (2022-2026) and as Chair of ISHS Working Group Southeastern and Eastern Europe Vegetables and Potatoes (2017-2026). He has convened several international ISHS symposia and has edited multiple volumes of *Acta Horticulturae*, with additional proceedings currently in preparation. He has also led FAO workshops at ISHS symposia. In particular, he has facilitated the participation of scientists from developing and transition countries, especially in Southeastern Europe, and actively strengthened collaboration between ISHS and FAO.

Beyond ISHS, Professor Gruda serves as President of the Union of European Academies for Science Applied to Agriculture, Food and

Nature (UEAA) and as an Expert on Green Agriculture for the FAO in Europe and Central Asia. He is Editor-in-Chief of the *International Journal of Vegetable Science* (Taylor & Francis), and the *Encyclopedia of Vegetables* (Elsevier), and serves on the editorial and advisory boards of several scientific journals, including the official journal of the ISHS, *European Journal of Horticultural Science* (eJHS). His scientific achievements have been recognized through membership, honorary membership, or corresponding membership in four European Academies of Sciences or Agricultural Sciences, as well as several prestigious distinctions, including the Dr. Heinrich Baur Prize of the TUM in Germany and the Distinguished Scientist Award of the Chinese Academy of Sciences. Professor Gruda has been regularly invited to serve as a keynote speaker at international conferences on sustainable horticultural production. Throughout his distinguished career, he has actively mentored and supported early-career scientists.

Division Horticulture for Human Health



➤ Tim O'Hare

Associate Professor Tim J. O'Hare was re-elected Chair of ISHS Division Horticulture for Human Health, after serving as Chair from 2022-2026. He will be assisted by Vice-Chair Dr. Luca Mazzoni (Italy).

Associate Professor O'Hare previously led the fruit and vegetable biofortification program within the Queensland Alliance for Agriculture and Food Innovation (QAAFI) at the University of Queensland, Australia. After completing his PhD in fruit tree physiology in 1989, he joined the Queensland Department of Primary Industries where he conducted postharvest horticultural research into tropical fruit and Asian vegetables. Working with the Department provided a chance to work in both sub-tropical and tropical locations within Australia, both in the field and in the laboratory. During this time, Tim conducted

research into storage and postharvest quality of fruit and vegetables, including nutritional quality.

In parallel with an increasing community interest in healthy eating, he became involved in the phytonutrient assessment of functional foods and subsequently instigated the development of biofortified horticultural crops through targeted breeding. Of specific interest to Associate Professor O'Hare was the dual application of the plant pigments, carotenoids and anthocyanins, as phytonutrients for human health, but also as a means to visually differentiate biofortified products from conventional products in the marketplace.

In 2010, Tim joined the newly formed QAAFI at the University of Queensland. Tim's research has included the development and assessment of biofortified products including high-zeaxanthin sweetcorn and capsicums, high-lycopene tomatoes, purple-anthocyanin sweetcorn, omega-7 macadamias, high-folate strawberries, and enhanced beta-carotene mangoes. He was subsequently awarded the Australian Innovation Challenge Award in 2015 for the development of high-zeaxanthin sweetcorn for eye health.

Tim has been involved in the International Symposium on Human Health Effects of Fruits and Vegetables (FAVHEALTH), from its inaugural symposium in 2005 (Quebec) to the most recently completed symposium in Rotorua (2024). Tim was responsible for co-convening FAVHEALTH in 2014, at the XXIX International Horticultural Congress (IHC) in Brisbane, Australia, with the symposium becoming a recurrent symposium theme at IHC. In 2026, he initiated a newly formed Working Group 'Fruits, Vegetables, and Nuts for Human Health' within the Division Horticulture for Human Health.

Division Landscape and Urban Horticulture



➤ John Mwibanda Wesonga

Dr. John Mwibanda Wesonga was appointed Chair of ISHS Division Landscape and Urban

Horticulture, following Dr. Francesco Orsini in this position. He will be supported by Vice-Chair Angeliki Paraskevopoulou (Greece). Dr. John Wesonga is an Associate Professor of Horticulture in the Department of Horticulture and Food Security at Jomo Kenyatta University of Agriculture and Technology (Kenya). He has over 25 years experience in teaching and research in horticulture. His research program has mainly focused on crop protection (insect pests management), capillary wick irrigation systems and growing systems for urban horticulture (including simplified soilless systems, vertical farming systems, climate change and microgreens). He has actively supported the development of the horticultural profession in Kenya through the Horticultural Association of Kenya (HAK) where he served as Chairman and Vice-Chairman. He has a proven track record in organizing scientific events and fostering professional networks. He supported and mentored youth through the Horticulture Students Association as the patron. He is actively engaged in research and innovation to advance scientific knowledge in horticulture in new frontiers such as microgreens, simplified hydroponics and other technologies for urban horticulture. He was involved in the organization of ISHS scientific meetings, including the 1st All Africa Horticultural Congress held in Nairobi, Kenya (2009) and the 1st International Symposium on Ornamentals in Africa (2013). He served as an editor of *Acta Horticulturae* 1077 and 911. He is a collaborator in an EU funded project on the development of Climate Services for Africa named: Safeguarding African Foodsheds and ecosystems for all Actors across Local, regional, and international levels to manage migration (SAFE4ALL Africa: <https://www.safe4allafrica.eu/>). He published a book chapter on Urban Food Production Technologies, Innovations and Management Practices in Africa (https://doi.org/10.1007/978-981-99-2427-1_17).

Division Ornamental Plants

Professor Dr. Patricia Duarte de Oliveira Paiva was elected Chair of ISHS Division Ornamental Plants. She succeeds Dr. Margherita Beruto (Italy) in this position, who will continue as Division Vice-Chair.

Professor Dr. Patricia Duarte de Oliveira Paiva is full professor in the Plant Science Department at the Federal University of Lavras, Brazil. She graduated with a BS in Agronomy in 1992, and received her MS (1994) and PhD (1998) degrees in Plant Science from the Federal University of Lavras. Starting in 1998 as professor at the same university, she currently teaches courses and undertakes research in floriculture and landscaping for undergraduate and graduate students,



› Patricia Duarte de Oliveira Paiva

while supervising MS and PhD students. She held the position of Vice-Head (2014-2015) and Head (2015-2016) of the Plant Science Department, Coordinator of the Graduate Program in Plant Science (2016-2021), and in 2024, achieved the position of Director of International Affairs.

Professor Paiva is actively undertaking research in ornamental plant propagation (including in vitro propagation and conservation), production and postharvest conservation of tropical cut flowers and foliage, and bulbous species. She has also been involved in landscaping studies, researching the origin and history of Brazilian gardens, and the use and qualification of urban green areas. Her results have been published in more than 200 peer refereed scientific papers. She is author of several books and book chapters on floriculture and landscaping. Since 2013, she has been Associate Editor and from 2025, Editor-in-chief of the journal *Ornamental Horticulture*.

She became a member of the Brazilian Society of Floriculture and Ornamental Plants (SBFPO) in 1995. From 2013-2017, she was President of SBFPO and she remains a Board Member of this Society (2017-2025; 2026-2029). Professor Paiva has been member of the ISHS since 2008 and has served as country representative for Brazil on the ISHS Council since 2013. She has served as Convener and invited speaker of one ISHS international symposium and several non-ISHS congresses and symposia. In 2018, she was elected a Board member of ISHS, where she represented South America. In 2022, she was re-elected for a second term, where she led the initiative to reach out to Young Minds. This ultimately led to the creation of the ISHS Young Minds Committee. This Committee, comprised of students and early-career researchers from all around the world, is committed to the promotion of horticultural science, and providing young scientists with an opportunity to learn and practice horticulture.

Division Plant Genetic Resources, Breeding and Biotechnology



› Sandra Correia

At the recent ISHS Council meeting in Kyoto, Japan, Dr. Sandra Correia was confirmed Chair of ISHS Division Plant Genetic Resources, Breeding and Biotechnology, succeeding Professor Jorge Canhoto. She will work alongside Vice-Chair Dr. Lorenzo Burgos (Spain) to promote scientific excellence, strengthen international collaboration, and support the Division's activities.

Sandra is a Plant Biologist specialising in Plant Biotechnology, with over 15 years of research experience in plant propagation and crop protection. She graduated from the University of Coimbra (Portugal) with a degree in Biology in 2004 and completed her PhD in Plant Physiology in 2011. In 2017, she received a Fulbright Visiting Scholar Grant, which enabled her to conduct research at the University of Maryland (USA) and to expand her international collaborations.

Her postdoctoral research is conducted mainly at the Centre for Functional Ecology – Science for People & the Planet, University of Coimbra, where she is currently an assistant professor. From 2022 to 2025, she served as Director of the Department of Protection of Specific Crops at the InnovPlant-Protect Collaborative Laboratory (Portugal), where she promoted the translation of scientific research into sustainable agricultural solutions.

Her research focuses on plant biotechnology, developmental biology and the molecular regulation of plant regeneration, with particular emphasis on improving propagation systems for horticultural crops. Her work bridges fundamental and applied research, contributing to innovation in crop production. Sandra has been an active member of the ISHS for over a decade, contributing to its scientific, editorial and organisational activities. She has co-convened several international symposia, including meetings in Coimbra (2013) and Angers (2022), as well as the

2026 International Horticultural Congress in Kyoto. She has co-edited two volumes of *Acta Horticulturae*, authored numerous publications in the series, and serves as a referee. She chairs the ISHS Working Group Horticultural Biotechnology and Breeding. Beyond ISHS, Sandra is an Associate Editor of *Plant Cell, Tissue and Organ Culture*, and *Frontiers in Plant Science*, and is actively involved in several national and international scientific organisations, including EPSO, CiB and COST Actions.

Division Plant-Environment Interactions in Field Systems



› Stefano Musacchi

Dr. Stefano Musacchi was elected Chair of ISHS Division Plant-Environment Interactions in Field Systems, succeeding Dr. Evelyn Costes. He will work closely with Vice-Chair Dr. Mehdi Sharifi (Canada) to support the Division's eight Working Groups and promote scientific exchange and international collaboration in horticultural crop physiology and orchard systems research.

Dr. Musacchi is Professor and Endowed Chair of Tree Fruit Physiology and Management in the Department of Horticulture at Washington State University (WSU), USA, where he has served since 2013 and has held the rank of professor since 2018. Before joining WSU, he was an assistant professor at the University of Bologna, Italy, and an Instructor of Fruit Crops at the Free University of Bozen-Bolzano. He earned his Ph.D. in Pomology from the University of Bologna in 1996.

Over more than 30 years, Dr. Musacchi has developed an internationally recognized research program focused on fruit tree physiology, orchard systems and sustainable fruit production. His research examines interactions among rootstocks, canopy architecture, crop load, light interception, pollination, environmental conditions, and management practices in temperate fruit crops. Through field-based research and strong collaboration with growers and industry

partners, he has helped develop innovative orchard systems that enhance productivity, fruit quality, labor efficiency, and environmental sustainability in apple, pear and sweet cherry production.

Dr. Musacchi has authored more than 100 scientific publications, delivered over 200 invited and scientific presentations, and collaborated extensively with researchers and industry stakeholders worldwide. Since joining WSU, he has secured over USD 8.5 million in direct support for his program, with grants from USDA SCRI projects, TASC programs, Washington State specialty-crop grants (WSDA), commodity commissions (WTFRC), and international partnerships continuing to fund his research.

An active mentor and educator, Dr. Musacchi has supervised numerous graduate students, postdoctoral researchers, and visiting scientists in Europe and the United States.

He serves as Chair of the ISHS Working Groups Rootstock Breeding and Evaluation, and European and Asian Pears. He has contributed to numerous ISHS symposia as an organizer, scientific committee member and keynote speaker. He is the editor of *Acta Horticulturae* 1346.

Division Postharvest and Quality Assurance



› Giancarlo Colelli

Professor Giancarlo Colelli was elected Chair of ISHS Division Postharvest and Quality Assurance for a second term in this position and will be assisted by Vice-Chair Dr. Sukhvinder Pal (SP) Singh (Australia), who was also re-appointed for a second term.

Giancarlo Colelli is full professor at the University of Foggia, Italy. His research activities focus on relationships between physiology/quality of fresh fruit and vegetables, and equipment for postharvest handling and storage. He has been actively investigating issues related to optimization of temperature and atmosphere management during storage, sustainable approach to modified

atmosphere packaging, and non-destructive technologies including computer vision systems, near-infrared spectroscopy and hyperspectral imaging. Professor Colelli has coordinated more than 20 national and international R&D projects including QUAFETY (EU 7FP) and on-going SUS&LOW (MIUR PRIN17) and CIRCUL-A-BILITY (co-chair, EU-COST). He was co-organizer of all editions of the European Short-course on Quality & Safety of Fresh-cut Produce (an industry-oriented training event in Italy, Spain, Germany, Turkey, UK and Portugal) and of other international events including four ISHS symposia (V International Conference on Fresh-Cut Produce – 2024, XI International Symposium on Artichoke, Cardoon and Their Wild Relatives – 2023, VI International Symposium on Applications of Modelling as an Innovative Technology in the Horticultural Supply Chain – Model-IT2019 and XI International Controlled and Modified Atmosphere Research Conference – CAMA2013). He has authored more than 200 papers, of which 173 are listed in Scopus. He was co-editor of four *Acta Horticulturae* volumes (1071, 1311, 1424, and 1442), served as Chair of ISHS Working Groups Controlled & Modified Atmosphere Storage of Horticultural Products, and Modelling of Postharvest Processes, and has actively contributed to several other ISHS symposia as a member of scientific committees and as an invited speaker. Finally, Giancarlo Colelli has been very active in international cooperation programs related to innovation transfer in postharvest technology in many countries, including China, Colombia, Egypt, Jordan, Syria, Kenya, and Peru.

Division Precision Horticulture and Engineering



› In-Bok Lee

Professor In-Bok Lee (South Korea) was appointed for a second term as Chair of ISHS Division Precision Horticulture and Engineering. He will be supported by Vice-Chair Dr. Hicham Fatnassi (France).

Professor Lee acquired both his MSc and PhD at Ohio State University in the USA. Later, he worked as post-doctoral researcher at the same institution and then transferred to the Laboratory of Controlled Environment Agriculture at the National Institute for Rural Engineering in Tsukuba, Japan, as a visiting scholar. He was then employed as a Junior Researcher for the Bioproduction Fundamental Engineering Division at the National Institute of Agricultural Engineering, South Korea. He is currently a full professor at the Department of Rural Systems Engineering at Seoul National University, South Korea, where he founded the Aero-environment Energy Engineering Laboratory (A3EL). His career has been actively devoted to teaching and research focusing on environmental control in different agricultural structures (e.g., greenhouse, livestock house, etc.), energy saving technologies, and computational fluid dynamics (CFD). Presently, he is Director of Space Agriculture at Seoul National University.

Professor Lee has authored and co-authored hundreds of scientific papers published both domestically and internationally. He has served as Chair of ISHS Working Group Computational Fluid Dynamics for four years. He also organized the International Symposium on New Technologies for Environment Control, Energy-Saving and Crop Production in Greenhouse and Plant Factory (Greensys2013). Moreover, Professor Lee has been invited to participate in many local and international conferences and meetings on smart crop and livestock production as a keynote speaker and/or chair. He is particularly proud of the efforts and activities he has made as Chair of the Division Precision Horticulture and Engineering for the past four years, working with eight Working Group Chairs to host various ISHS symposia.

Division Sustaining Horticulture in a Changing World

At the recent ISHS Council meeting in Kyoto, Japan, Dr. Melinda Knuth was confirmed Chair of ISHS Division Sustaining Horticulture in a Changing World. She will serve in the office in close collaboration with Vice-Chair Professor Dr. Maria Claudia Dussi (Argentina). Dr. Melinda Knuth's research priorities are business management and behavioral economics. Historically, Dr. Knuth has evaluated trade flows of horticulture products in the United States, estimated the economic impact of the North Carolina and United States green industries and national compost industry, assessed the benefits plants provide to human health, and estimated consumer acceptance of retail garden center messaging. Dr. Knuth specializes in connecting the horticulture supply chain with consumer



> Melinda J. Knuth

demand. Her work integrates needs assessment, economic game theory, enterprise budgets, impact assessment, surveys, eye-tracking, extension education, and field-level (retail and grower on-site) experimentation.

Dr. Knuth is an Associate Professor in Horticultural Science at North Carolina State University in Raleigh, North Carolina, USA. She holds a graduate certificate in Teaching, Training and Educational Technology: Instructional Design from North Carolina State University. Dr. Knuth received her PhD from Texas A&M University in Horticultural Science with a certificate in Applied Statistics. From there, she was a postdoctoral research associate at the University of Florida in the Food & Resource Economics Department until starting at North Carolina State University. Currently, Dr. Knuth teaches a graduate level human-behavior methods course, greenhouse management, floriculture production, horticulture business planning and development, and horticulture marketing. She serves as a GenNext Community Connector Lead with AmericanHort. Dr. Knuth received the 2026 American Society for Horticultural Science's Early Career Award for Research, Innovation and Creativity, the 2025-26 Goodnight Early Career Faculty Award at NCSU, Greenhouse Grower's Spotlight Award for her work on the Sustainabloom floriculture sustainability program, and GPN Magazine's 40 under 40 award in 2021.

Division Temperate Tree Fruits

Professor Luca Corelli Grappadelli was re-appointed Chair of ISHS Division Temperate Tree Fruits, following his first term in this position. Luca will be assisted by Vice-Chair Professor George Manganaris (Cyprus), who was also re-elected for a second term.

Luca Corelli Grappadelli is Professor of Fruit Growing at the University of Bologna (Unibo), Italy, where he has worked for the past 44 years. His research has covered topics related to fruit tree ecophysiology, in particular tree/light relations, and fruit



> Luca Corelli Grappadelli

growth physiology. Luca developed low-cost solutions for PAR measurement, whole-tree gas exchange monitoring, and fruit gauges accurate enough to allow measuring fruit diameter changes every 15 minutes. These tools set the foundations for a strong program in fruit tree ecophysiology that has morphed into a Precision Fruit Growing program, which includes strong collaborations with engineering teams, and which covers autonomous vehicles, sensors, AI-based data mining, robot-friendly orchard design and precision irrigation. More recent focus has been placed on algorithms linking preharvest fruit/orchard features to postharvest performance in storage of apples, pears, nectarines and kiwifruit. Agrivoltaics work is also being undertaken to provide tracking/management strategies for mobile PV panels. Luca was a Fulbright Scholar (Class of 1983) and has studied and carried out research in the US (Clemson and Cornell Universities), Australia (Tatura Center for Excellence/Smart Farm) and at Stellenbosch University, South Africa. He is/has been involved in many collaborative international research projects. He has served as National Coordinator of the "Precision Agriculture" Spoke of the AGRITECH Project (2022-2026), disbursing EU Covid-Recovery funds to research institutions active in Agriculture. He was Vice-Chair of ISHS Section Pome and Stone Fruits (2014-2018) and Vice-Chair of the Division Temperate Tree Fruits (2018-2022). He was Chair of ISHS Working Group Environmental Physiology and Developmental Biology, and has convened/co-convened several ISHS symposia, and edited the respective *Acta Horticulturae* proceedings. During his tenure at Unibo he has taught classes in Fruit Tree Physiology, Arboriculture, Fruit Growing and Viticulture. He has supervised/co-supervised 18 PhD students, and many MSc students. For 11 years (2006-2017), he was part (as Secretary) of the 5-Member Evaluation Committee of the Italian Consiglio delle Ricerche in Agricoltura (CREA). He has participated in and presented

papers to over 20 ISHS symposia and 7 International Horticultural Congresses.

Division Temperate Tree Nuts



➤ Giulia Marino

Dr. Giulia Marino was re-elected Chair of ISHS Division Temperate Tree Nuts. She will be supported by Vice-Chair Dr. Maria Jose Rubio Cabetas (Spain).

Giulia Marino is an Associate Professor of Cooperative Extension in Orchard Systems in the Department of Plant Sciences at the University of California, Davis (USA). Her applied research program integrates pomology, tree physiology, germplasm evaluation, and orchard management systems to improve the profitability, sustainability and abiotic stress resilience of perennial cropping systems.

Dr. Marino earned her PhD in Fruit Tree Systems from the University of Palermo (Italy), where her research focused on alternate bearing and carbon budget dynamics in pistachio. Her current work spans several tree species, including pistachio, olive, cherry and almond, and encompasses tree water use and water relations under drought and salinity, fruit phenology, ripening and quality, temperature responses, and the mechanisms governing winter dormancy and dormancy release.

She has led numerous research projects supported by California commodity boards, the California Department of Food and Agriculture, and other state and federal agencies. Recently, she was awarded the UC ANR Endowed Presidential Chair in Nut Genetics to advance the development of improved pistachio scion and rootstock germplasm.

As part of her Cooperative Extension appointment, Dr. Marino develops and delivers science-based information to California growers and industry stakeholders through extension meetings, publications, decision-support tools, and grower-oriented applications, with the goal of translating research into practical impact.

She actively mentors graduate students, postdoctoral scholars, visiting scientists, and

early-career researchers from around the world, fostering international collaboration and scientific exchange.

Dr. Marino convened the IX International Olive Symposium (Davis, USA, 2023), served as editor of the corresponding *Acta Horticulturae* volume, and has contributed extensively to ISHS activities through service on scientific and organizing committees for numerous international symposia.

Division Tropical and Subtropical Fruit and Nuts



➤ Nicolas Roux

In Kyoto, the ISHS Council confirmed the election of Dr. Nicolas Roux as Chair of ISHS Division Tropical and Subtropical Fruit and Nuts. He succeeds Dr. Karin Hannweg in this position. He will work in close collaboration with Vice-Chair Dr. Sangram Dhumal (India) to support the activities of nine Working Groups that are related to this Division in the next four years.

Dr. Nicolas Roux is based in Montpellier, France. Recently retired, Dr. Roux was Principal Scientist, leading the high value crops program including research along the value chain of tropical fruits and nuts at The Alliance of Bioversity International and CIAT. Before that, as Banana Program Leader for the same international organization, he was also the manager of the CGIAR International Musa Germplasm Transit Centre Genebank (ITC) based in Leuven, Belgium. Nicolas was the Coordinator of MusaNet, the Global Musa Network that brings 100+ registered experts and national banana collections together to identify strategic actions for conservation and use of *Musa* diversity. For many years, Nicolas led the genetic resources team of Bioversity International and managed the Global Musa Genomics Consortium that sequenced the banana genome. With the support of other Bioversity staff and partners, the banana program of the Alliance of Bioversity and CIAT was well recognized for their capacity to analyse sequence informa-

tion and apply it to solve several issues such as deciphering important traits like tolerance to drought and Fusarium wilt Tropical race 4 (TR4), while also promoting quality fruit traits that had an enormous impact on farmers. From 1993 to 2003, he worked as a Research Scientist at FAO/IAEA Laboratories in Vienna, Austria, on cellular biology and biotechnology, including mutation breeding techniques. In Venezuela, from 1988 to 1993, he managed a tropical fruit plantation and an industrial tissue culture laboratory.

Nicolas obtained his PhD at the Palacký University Olomouc in Czech Republic in 2002 and his MSc at the Haute Ecole Charlemagne, Gembloux, Belgium, in 1987. Nicolas has been involved in multiple projects, for which he co-authored over 200 publications and was often invited as keynote speaker. Nicolas has been a member of ISHS since 2005 and was appointed Chair of ISHS Commission Banana in 2020, which was converted to ISHS Working Group Banana in 2023.

Division Vegetables, Roots and Tubers



➤ Ferdinando Branca

Professor Dr. Ferdinando Branca was re-appointed Chair of ISHS Division Vegetables, Roots and Tubers. Professor Branca will serve in the office in close collaboration with Vice-Chair Professor Dr. Masayoshi Shigyo (Japan). Professor Branca started his research career as a researcher at the Institute of Vegetable and Flower Crops of the University of Catania, Italy. Since 2025, he has been a full professor, participating in/leading several regional, national and international (China, South Korea, Tunisia) research projects on innovation of vegetables and medicinal/aromatic plants. He has focused on urban horticulture by exploiting and growing wild plant genetic resources. For several decades, he provided advanced breeding lines of broccoli, tomato and snap bean for organic farming. Professor Branca teaches vegetable production, food technology, biotechnologies for vegetable

and flower crops, and biotechnology at the University of Catania. He was the convener of the VI International Symposium on Brassicas and XVIII Crucifer Genetics Workshop held in Catania in 2012. From 2014, he was first Vice-Chair of ISHS Section Vegetables, Roots, Tubers, Edible Bulbs, Brassica, Asparagus, and from 2016, he was Co-Chair of this Section. He was a co-convener of the III International Organic Fruit Symposium and I International Organic Vegetable Symposium in Catania in 2021. From 1997 to 2024 he was Chair of the Brassica Working Group of the European Cooperative Program on Genetic Research (ECPGR). From 2018 to 2024, he was Chair of ISHS Working Group Organic Vegetables. Professor Branca was an advisory board member of two Organic Breeding H2020 projects “Liveseed” and “Ecobreed,” and he coordinated the EU H2020 BRESOV project (www.bresov.eu) on organic breeding and farming of broccoli, snap bean and tomato (GA 774244). Currently, he is the leader of the Brassica flagship group of the EU Horizon Europe project COUSIN (Crop wild relatives utilisation and conservation for sustainable agriculture), and the co-chair of the International Plant Grafting Society (IPGS).

Division Vine and Berry Fruits



► Bruno Mezzetti

Professor Dr. Bruno Mezzetti was elected for a second term (2026-2030) as Chair of ISHS Division Vine and Berry Fruits. During his second mandate, he will work closely with Vice-Chair Professor Lisa Wasko DeVetter, Department of Horticulture, Washington State University (USA).

Professor Mezzetti is Full Professor of Arboriculture at the Marche Polytechnic University, Ancona, Italy. Over a 35-year academic and research career, he has focused on genetics, breeding, biotechnology, and cultivation systems aimed at improving the sustainability, resilience and quality of fruit production, with particular emphasis on berry crops and grapevines. His research has integrated laboratory-based studies on innovative biotechnological approaches – including cisgenesis, genome editing and RNA interference (RNAi) – with field-based investigations conducted under diverse cultivation conditions. This multidisciplinary approach has enabled the study of both genetic and environmental factors influencing crop sustainability, productivity and fruit quality. Particular attention has been devoted to the compositional analysis of novel products in order to assess their safety and nutritional value for consumers. Professor Mezzetti is the author of 280 peer-reviewed scientific publications (Scopus H-index: 58), many of which focus on berry crops and grapevines. He was recognized as a Highly Cited Researcher by the Web of Science - Clarivate in 2019, 2020 and 2021. He has coordinated and participated in 12 European research projects, approximately 30 national projects, and numerous international research networks.

Throughout his career, Professor Mezzetti has been actively involved in ISHS activities. He has served as Chair of one International Strawberry Symposium, two berry symposia within the International Horticultural Congress (IHC), and two international berry workshops. He has also edited five volumes of *Acta Horticulturae*. In addition, he has contributed to several symposia and *Acta* volumes organized by other ISHS Working Groups, including those focused on grapevine, in vitro culture and biotechnology. The experience gained through many years of active participation in ISHS, together with his first term as Chair of the Division Vine and Berry Fruits, has further strengthened his leadership skills and his ability to engage effectively with the Division's five Working Groups, each characterized by distinct scientific priorities and activities.

Special Division Young Minds

Chayce Griffith, President of the ISHS Young Minds Committee, has recently been



► Chayce Griffith

appointed as Chair of the newly established Special Division Young Minds. He will be supported by Vice-President Ms. Winnie Wambu-gu. Through the ISHS Young Minds Division, he seeks to develop networking opportunities for young scientists, to better integrate young people into ISHS, and to strengthen their career pathways.

Chayce is an Assistant Professor of Tree Fruit Physiology at Michigan State University in East Lansing, Michigan, USA. His applied research program is focused on the physiology of apples and stone fruit to improve the resilience of these crops to abiotic stress such as nutrient deficiency and cold weather. In 2025, he received his PhD in Horticulture from Michigan State University, focusing on the relationship between growth dynamics and vascular function in apples to better understand bitter pit, a calcium-deficiency disorder. This research led to further experimentation with plant growth regulators to mitigate the disorder, methods which have since seen widespread adoption by fruit growers. The publication of these findings resulted in the receipt of the ASHS Outstanding Extension Publication Award. His review of the role of fruit xylem function in bitter pit was awarded the U.P. Hedrick Award by the American Pomological Society. As a student and a young emerging scientist, he has been very active in ISHS, publishing multiple *Acta Horticulturae* papers and serving as a keynote speaker for the XIII International Symposium on Integrating Canopy, Rootstock and Environmental Physiology in Orchard Systems in New Zealand in 2025. ●

> ISHS Awards bestowed

The ISHS takes great pride in presenting the ISHS award recipients for 2026. The ISHS Nominations and Awards Committee has been in consultation and received approval from the ISHS Council at its meeting in Kyoto, Japan, in August 2026, to bestow the ISHS Fellow Award on thirteen distinguished scientists, ISHS Honorary Membership on five exceptional members of the Society, and the ISHS Horticulture Innovation Award on one person and one institution. According to the Society's Rules of Procedure, the ISHS Fellow Award is presented in recognition of a person's outstanding contribution to horticultural science worldwide. ISHS Honorary Membership is presented to an ISHS member in recognition of exceptional service to the Society in many capacities throughout their career. The ISHS Horticulture Innovation Award is the highest recognition granted by ISHS Council to a person or institution in making an exceptional contribution to horticulture innovation. This award focuses on those with innovative ideas to create new products and services that are seen as important landmarks in the progress of horticulture at an international level. The nominations for these awards were presented by individual ISHS members complete with supporting letters from five members of the Society from at least three different countries. Congratulations to the ISHS award winners for the Class of 2026.

ISHS Fellow Award

Dr. Nahla V. Bassil (USA)

Nahla is an internationally respected, well cited, and recognized plant geneticist. Work-



> Nahla V. Bassil

ing as a plant geneticist/berry crops curator with the USDA-ARS National Clonal Germplasm Repository in Oregon, USA, Nahla is one of the world's foremost experts in DNA-based marker development and its application to germplasm management, diversity analysis, and breeding across numerous temperate fruit and nut crops. Her contributions, spanning SSR toolkits, high-density SNP array development, reference genome projects, and practical diagnostic assays, have transformed the genetic and genomic infrastructure available to researchers and breeders internationally. While she has published over 205 peer-refereed papers, 8 book chapters, and been cited more than 10,000 times (H-index 54), her work has repeatedly defined new standards for scientific rigor, technological innovation, and community coordination. The strawberry, cherry, peach, and apple SNP arrays that she coordinated have become foundational tools across public and private breeding programmes worldwide. These platforms have accelerated QTL discovery, genome-wide association studies, and the integration of genomic information into routine breeding decisions, bringing DNA-informed breeding from concept to practical reality. Her leadership in *Rubus* genomics, including identifying genes for aphid resistance, developing high-value fingerprinting markers, and contributing to chromosome-scale genome assemblies, have transformed research capacity and breeding opportunities for this economically important genus. She has also led or co-lead international collaborations resulting in high-density genotyping arrays for blueberry and cranberry, enabling GWAS, genomic selection, and high-resolution genetic diversity analyses in crops where such tools were previously lacking. She was convener of the International Symposium on Molecular Markers in Horticultural Species in 2009 and has served on the Scientific Committee or Organizing Committee for another seven ISHS symposia.

Prof. Dr. Stefania De Pascale (Italy)

Stefania is a professor at the University of Naples Federico II. Her research interests lie in determining the effects of environmental and cultural factors on plant growth, crop yield and product quality for a wide range of vegetable and ornamental crops, both in open fields and in protected growing environments. Her main research interests include: abiotic stress adaptation in plants; sustainable water and nutrient management; postharvest physiology; and circular agriculture. For more than 25 years,



> Stefania De Pascale

her research activities have included plant biology and crop production in space and the use of crop plants in bioregenerative life support systems (BLSS) for long-duration space missions such as on the International Space Station. Her contributions to academia have been significant. She has authored or co-authored 272 peer-refereed journal articles. With over 6,400 citations and an H-index of 40, she has been listed among the world's top 2% of scientists (Stanford University/Elsevier). She is a consultant to the Food and Agricultural Organization of the United Nations (FAO) Plant Production and Protection Division (AGP), and an external consultant for the Italian Ministry of University and Research, the Italian Ministry of Agriculture and Forestry, the EU, the COST Office, and many international research institutes around the world. Within ISHS, she was Chair of Commission Protected Cultivation (2014-2018) and Division Protected Cultivation and Soilless Culture (2018-2022), and convener of the International Symposium on Innovation and New Technologies in Protected Cropping at IHC2014.

Prof. Dr. Esmaeil (Essie) Fallahi (USA)

Essie is an internationally respected pomologist and leader in horticultural research. For the past 30 years, he has been a professor and Director of Pomology and Viticulture at the University of Idaho, USA. His research interests have traditionally focused on tree fruit preharvest and post-harvest physiology, precision irrigation, improving postharvest fruit quality by optimizing nutrient partitioning, the application of growth regulators, blossom and fruit thinning, and rootstock physiology. More



› Esmail (Essie) Fallahi

recently, as the impacts of climate change have become more pronounced, Essie has explored opportunities to grow new alternative crops, such as table grapes, wine grapes and almonds under cool desert conditions. Essie has authored or co-authored 258 peer-refereed journal articles and 18 books and book chapters. His research papers have been cited 5,882 times, resulting in an impressive H-index of 42. While Essie has supervised or co-supervised more than 40 graduate students, his international fruit schools, held at the Idaho Research Station in both the spring and fall, train 600-1200 people annually, with special groups attending from Iran, Afghanistan, Italy, Mexico and Canada. Within ISHS, Essie has convened or co-convened several symposia as well as participated as a member of the Organizing Committee or the Scientific Committee in symposia. He served as Vice-Chair of ISHS Commission Irrigation and Plant Water Relations (2014-2018) and Division Physiology and Plant-Environment Interactions of Horticultural Crops in Field Systems (2018-2022) and is currently ISHS Council representative for USA.

Dr. Ep Heuvelink (Netherlands)

Ep is an associate professor within the Horticulture and Product Physiology group at Wageningen University in the Netherlands. Ep is internationally recognized as an expert in crop physiology and crop modelling for greenhouse horticulture. His current research interests include among others: the role of light spectrum in crop growth and development; combining knowledge-based and data-driven modelling; combining sensors and modelling (soft sensors); and crop physiology in relation to energy saving in



› Ep Heuvelink

greenhouses. With recent developments such as digital twins and autonomous cultivation systems, the knowledge and skills that Ep has acquired have become all the more relevant. Ep has published more than 150 papers in peer-reviewed scientific journals, over 200 articles for a professional audience, and written or contributed to 8 books. With over 15,585 citations and an H-index of 66, Ep is currently listed among the Stanford/Elsevier world's top 2% scientists in the field of agriculture and plant sciences. He has co-supervised 23 PhD candidates and is currently supervising another 19. In addition, he has supervised over 120 MSc theses. On average, over the past five years, he has secured approximately EUR 300,000 per year in research funding for the Horticulture and Product Physiology group. Ep was convener or co-convener of the III International Symposium on Models for Plant Growth, Environmental Control and Farm Management in Protected Cultivation (HortiModel2006), the International Symposium on High Value Vegetables, Root and Tuber Crops, and Edible Fungi – Production, Supply and Demand (IHC2014) and the VII International Symposium on Light in Horticulture (2012), and member of the Organising Committee for multiple other ISHS symposia. From 2003 till 2012, Ep was Chair of ISHS Working Group Modelling Plant Growth, Environmental Control, Greenhouse Environment.

Dr. Daryl Joyce (Australia)

Daryl is a plant scientist specialising in horticultural supply chains. Recently retired from the Department of Agriculture & Fisheries, Queensland, Australia, Daryl is an honorary professor with the University of Queensland. For over four decades, Daryl's



› Daryl Joyce

research activities have focused on post-harvest biology, crop physiology, mineral nutrition, fruit quality, stress physiology, and enhancing production systems for fruit, vegetables and ornamental crops. Through sustained scientific leadership and collaboration with research institutions, industry partners and international organisations, he has helped translate scientific discoveries into practical outcomes that have benefited horticultural industries and communities globally. His research portfolio is both foundational and applied, bridging mechanistic plant science with tangible outcomes for growers, exporters, supply chains and consumers. A defining feature of Daryl's career has been his dedication in mentoring the next generation of scientists. He has supervised and guided more than 50 research students, many of whom have gone on to become leaders in academia, government and industry. He is widely recognised for his exceptional ability to motivate and work collaboratively with a broad spectrum of stakeholders, including growers, exporters, industry bodies, policymakers and fellow scientists. Internationally, through the Australian Centre for International Agricultural Research (ACIAR), Daryl has supported numerous rural development projects in Thailand, Papua New Guinea, Fiji, the Solomon Islands, China, and the Philippines. These projects have focused on improving postharvest systems, enhancing research capability and strengthening horticultural supply chains. With more than 220 peer-refereed journal articles, numerous book chapters, edited volumes and technical bulletins, Daryl is widely recognised as one of Australia's leading horticultural scientists.

Prof. Dr. Leo F.M. Marcelis (Netherlands)



› Leo F.M. Marcelis

Leo is a professor at Wageningen University in the Netherlands, where he leads the Horticulture and Product Physiology group. Since 1987, Leo has devoted his career to the study of controlled environment horticulture (greenhouse horticulture and vertical farming). His key area of expertise lies in experimental and simulation research on physiology, growth and product formation for the sustainable production of horticultural crops. His research contributes to improving crop production and quality, and includes energy savings, reduced nutrient emissions and the more efficient use of water. More recently, the introduction of LEDs in horticulture has extended his research activities to include the role of light in plant physiology, growth, quality and sustainability. Leo is widely recognized as a leading scientist in controlled environment agriculture, the modelling of horticultural crops and horticultural photobiology. Leo has authored over 286 peer-refereed publications and with an H-index of 73 (Google Scholar) and over 18,600 citations, he is one of the world's top 2% of scientists (Stanford/Elsevier). However, not only does Leo have an impressive scientific output, but he is also very engaged with the horticultural industry and colleagues worldwide. Throughout the years, he has led many large multidisciplinary research projects. He is currently leading three new projects, each valued at EUR 6 million, that are scheduled to run for 4-5 years, and involve multiple universities collaborating with companies in Europe, North America and Asia. Together with Prof. Gerard Bot, Leo was convener of GreenSys2004 – International Conference on Sustainable Greenhouse Systems, and he will again be the co-convener of GreenSys2027 – International Symposium on Smart and Sus-

tainable Greenhouse Systems. He was also co-convener of the V International Symposium on Applications of Modelling as an Innovative Technology in the Horticultural Supply Chain (Model-IT 2015), the International Symposium on Advances in Vertical Farming at IHC2022 and the International Symposium on Urban Horticulture: from Vertical Farming to Planting Design at the V European Horticultural Congress in 2024. Furthermore, Leo is ISHS Council representative for the Netherlands and is Chair of ISHS Working Group Vertical Farming since 2022.

Prof. Dr. Bart Nicolaï (Belgium)



› Bart Nicolaï

Bart is a professor at the University of Leuven (KU), Belgium, where he leads the Postharvest Research Group. He is also Director of the Flanders Centre of Postharvest Technology, a public-private partnership that was established by the University of Leuven and the Association of Belgian Horticultural Co-operatives in 1997, and co-founder of a spinoff company (Optiflux) that was established in 2021. The postharvest research group that Bart leads is arguably the world's leading research group in postharvest biology, with more than 40 staff and around 20 PhD students, postdocs and supporting technical staff. His research aims to increase our knowledge about postharvest changes within horticultural products, to develop new postharvest storage and supply chain management systems, and to develop and design new devices to measure and monitor postharvest quality changes of fruit and vegetables. By combining fundamental horticultural science, contemporary mathematical modelling and engineering, Bart's research group has developed virtual fruit and vegetables – mathematical models that describe and predict the behaviour of horticultural products and in parallel model biochemical

pathways and their subsequent regulation. This requires developing new modelling concepts such as multiscale modelling, introducing novel high throughput laboratory omics-techniques, applying new visualisation techniques to construct 3-D geometrical models of the plant or its organs, and using high-performance computers to solve the model equations. His research group also developed near infrared (NIR) spectroscopy as a fast and non-destructive technique to measure the sugar content of fruit. To date, Bart has authored more than 500 peer-reviewed articles, 28 book chapters and holds three patents. Within ISHS, Bart was convener of the International Conference Postharvest Unlimited (2002) and the XIII International Controlled and Modified Atmosphere Research Conference (CAMA2021), Chair of the Working Group Modelling of Postharvest Processes (2004-2014) and Chair of the Working Group Controlled & Modified Atmosphere Storage of Horticultural Products (2021-2025).

Prof. Dr. Bhimanagouda (Bhimu) Patil (USA)



› Bhimanagouda (Bhimu) Patil

Bhimu is currently a Regents Professor, Leonard Pike University Professor, Texas A&M University Director, Vegetable and Fruit Improvement Center Foods for Health Director, and USDA-National Center of Excellence for Melons Love Tito's Endowed Professor in Responsive Agriculture at Texas A&M University in the USA. In his multidisciplinary research, Bhimu has been a pioneer in addressing the connection between horticultural products and human health. By pulling together multidisciplinary teams and creating synergistic relationships between researchers, Bhimu has studied preharvest and postharvest factors, food safety and consumer satisfaction, and their impact on human health. To date, Bhimu has

published more than 250 peer-reviewed articles, prepared 26 book chapters, and edited 11 books. With over 17,517 citations and an H-index of 72 (Google Scholar), Bhimu is in the top 2% of active researchers in the areas of 'foods for health', 'horticultural science', and 'isolation and characterization of bioactive molecules' (Stanford/Elsevier). Within ISHS, Bhimu co-founded the International Symposium on Human Health Effects of Fruits and Vegetables (FAVHEALTH) in 2005, and was convener or co-convener of the 2nd, 6th and 8th FAVHEALTH in 2007, 2014 and 2021. In addition, Bhimu was Chair of Section Medicinal and Aromatic Plants (2014-2018), and Chair of Division Horticulture for Human Health (2018-2022).

Prof. Dr. Jorge B. Retamales (Chile)



> Jorge B. Retamales

Jorge is a retired Professor of Horticulture at the Universidad de Talca, Chile. His research interests deal primarily with the nutrition (calcium and nitrogen) and physiology of berry crops, including pruning, the application of growth regulators, plant growth and development. Over the course of his academic career, Jorge has authored or co-authored a total of 70 peer-reviewed journal articles, most of which are on berry and vine crops, one book chapter and five books. His book on Blueberries, published by CABI Agriculture and Bioscience books, now in its second edition, is a seminal reference for berry production throughout the world. His contribution to small fruit production, particularly in the southern hemisphere, has been significant, with numerous appointments as an advisor of blueberry fields in Chile, Peru, and in both Italy and Austria. He was the ISHS Council representative for Chile from 2000 through 2018, Chair of ISHS Working Group Strawberry from 2012-2016, and Chair of ISHS Division Vine and Berry Fruits from 2018-2022.

Dr. Terence L. Robinson (USA)



> Terence L. Robinson

Over the past 4 decades, Terence has been actively involved in applied orchard management studies and physiology research on tree fruits at Cornell University, New York, USA. His efforts have been central and critical to the Cornell tree fruit research and extension program, where his research includes work on pruning and training systems, thinning for crop control, growth regulation, irrigation and fertigation, rootstock evaluation, agricultural engineering, pruning and canopy management. However, his most significant contributions lie in the integration of physiological and genetic knowledge into practical orchard management systems. He has been a leader in the development of an Integrated Fruit Production programme and his chairmanship of Cornell's Fruit Program Work Team has helped ensure a seamless integration of applied research to industry extension. His development and optimization of the Tall Spindle training and production system, including mechanical aids, in close collaboration with growers, has transformed the industry with significant improvements in productivity, fruit quality and production efficiency. His efforts in the objective evaluation of rootstocks for diverse climates, soils and scions has resulted in the identification of key rootstocks for different conditions. His integration of carbon balance simulation models and fruit growth/abscission models of apples into online precision apple chemical thinning protocols has provided a quantum improvement in the consistency of apple thinning. Similarly, a new apple-specific model of tree water use in humid climates has been tested and translated for a website for apple growers. Within ISHS, Terence has served as Chair of Working Group Orchard and Plantation Systems (1996-2008) and convened two international symposia on Integrating Canopy, Rootstock and

Environmental Physiology in Orchard Systems (2008) and Physiological Principles and Their Application to Fruit Production (2014).

Prof. Dr. Zora Singh (Australia)



> Zora Singh

Zora Singh is Professor of Horticultural Science at Edith Cowan University in Perth, Australia. His research interests focus on developing innovative production and postharvest technologies, minimising losses during production and throughout the supply chain, and the provision of fresh, high-quality produce to consumers. Over the past 35 years, he has developed innovative approaches to manage ethylene, fruit ripening and quality, improved cold and controlled and modified atmosphere storage to enhance the shelf life of horticultural produce, and developed novel packaging and postharvest technologies to maintain quality during extended storage to facilitate shipments by sea for fresh horticultural produce. He has authored over 190 peer-refereed journal articles, written 32 book chapters and presented 65 peer-refereed conference proceedings. With more than 10,060 citations on Google Scholar and an H-index of 56, Zora has been recognised among the top 2% of scientists worldwide in the prestigious Stanford/Elsevier rankings (2025). In addition, he has two patents related to the development of ethylene antagonists to reduce postharvest losses in horticultural produce. Within ISHS, Zora was co-convener of the IV International Symposium on Horticultural Education, Extension and Training (2004) and the International Symposium on Bridging Science and Practice for Tropical and Subtropical Fruits and Nuts at (IHC2026), and a member of the Scientific Committee for the 29th and 32nd International Horticultural Congresses (IHC2014 and IHC2026). He has also served as Vice-Chair of ISHS Division Tropical and Subtropical Fruit and Nuts (2018-2026).

Prof. Dr. Kexuan Tang (China)



> Kexuan Tang

Kexuan is a distinguished professor at Shanghai Jiao Tong University in Shanghai, China. Over many years, Kexuan has built a strong and sustainable research program, focused on four major areas: plant metabolic regulation and engineering; trichome development; developing strategies for the control of agriculturally important sap-sucking insects; and synthetic biology, where he is using plants, such as *Artemisia* and *Marchantia* (liverworts), as platforms to produce important metabolites. He and his research group have delineated the first *Artemisia annua* genome, one of the largest plant genomes, as well as the regulatory networks of artemisinin biosynthesis and glandular secretory trichome (GST) initiation. Moreover, he has engineered *Artemisia annua* plants with enhanced anti-malaria artemisinin contents and engineered *Catharanthus roseus* plants with increased anti-cancer vinblastine contents. His research group has identified genes regulating GST initiation, as well as strategies for increasing the plant content of valuable chemicals and essential oils of important economic value. He has established *Agrobacterium*-mediated transformation protocols for the genetic modification of *Catharanthus roseus*, and developed strategies to effectively control sap-sucking insects such as aphids via genetic engineering. Kexuan has an impressive and distinguished publication record, having authored over 360 research articles in international scientific journals and published two books. He has over 21,000 citations and an H-index of 77 (Google Scholar), and not surprisingly, has been ranked among the world's top 2% scientists (Stanford/Elsevier). Moreover, he has registered a total of 126 patents. As Vice-Chair of ISHS Division Ornamental Plants (2018-2026), he has promoted international collaboration in the area of ornamental plant and biotech research and development.

Prof. Dr. Qichang Yang (China)



> Qichang Yang

Qichang is a Chief Scientist at the Institute of Urban Agriculture, Chinese Academy of Agricultural Sciences (CAAS), in Beijing, China. For over 35 years, Qichang has been working in four key areas: LED-based light environment regulation for plant factories; energy-efficient greenhouses for arid environments; cultivation systems for urban horticulture; and plant factory speed breeding. He proposed the concept of "light formulas" for precision light environment regulation in controlled environment crop production and built the world's first fully autonomous 20-layer vertical farming facility. He developed active heat storage greenhouse systems, which are now deployed across 36,667 ha in China, and engineered rapid breeding accelerators that enable 5-6 crop generations per year. His scientific leadership is evidenced by his prolific, high-quality publication record. He has authored or co-authored 139 peer-reviewed papers in top-tier journals, 10 monographs and holds 75 patents, demonstrating his commitment to translating research into practical applications. Over the duration of his academic career, he has mentored 68 postgraduate students and maintains active research collaborations with institutions in East Asia, the Middle East, Europe and North America. Within ISHS, Qichang has been a dedicated and active member for over 20 years. He was Chair of Working Group Design and Automation in Integrated Indoor Production Systems (2014-2023). He was convener of the prestigious International Symposium on New Technologies for Environment Control, Energy-Saving and Crop Production in Greenhouse and Plant Factory (GreenSys2017) in Beijing, the II International Workshop on Vertical Farming (VertiFarm2023) in Chengdu and the II International Symposium on Advances in Vertical Farming at IHC2026.

ISHS Honorary Membership

Prof. Dr. Roderick A. Drew (Australia)



> Roderick A. Drew

Rod is Emeritus Professor, School of Natural Sciences, at Griffith University in Queensland, Australia. For over four decades, Rod has served ISHS in multiple roles, including Vice-Chair and Chair of Commission Biotechnology and Molecular Biology (2002-2010), Council member for Australia, Chair of the Board for the Global Horticulture Initiative (2015-2016), President of the 29th International Horticultural Congress in Brisbane (IHC2014) and ISHS President (2014-2018). Rod has also initiated, facilitated and organised multiple international symposia including the International Symposium on Biotechnology of Tropical and Subtropical Species (1997), the International Symposium on Tropical and Subtropical Fruits (2000), the II International Symposium on Biotechnology of Tropical and Subtropical Species (2001), the International Symposium on Structural and Functional Genomics of Horticultural Plants (IHC2006), the IV International Symposium on Papaya (IHC2014) and the II International Symposium on Beverage Crops (2018). In 2016, Rod convened the first ISHS Symposia 2.0: International Symposia on Tropical and Temperate Horticulture, in Cairns, Australia, a joint initiative between ISHS, the Australian Society of Horticultural Science (AuSHS) and the Australian Institute of Horticulture (AIH).

Prof. Dr. Nazim Gruda (Germany)

Nazim is a Professor within the Department of Horticultural Sciences at the University of Bonn, Germany. His work is currently focused on sustainable vegetable production and the multitude of problems associated with mitigating the impacts of climate change in horticulture. He is also an internationally recognised authority in greenhouse horticulture and soilless culture and growing media.



> Nazim Gruda

In conjunction with FAO, he co-authored the publication 'Good Agricultural Practices for Greenhouse Vegetables in South-Eastern European countries' (2017). Nazim is a tireless advocate for promoting international cooperation and collaboration in horticultural research. His leadership roles within ISHS include being elected Chair of the Working Group Southeastern and Eastern Europe Vegetables and Potatoes (2017-2026) and Vice-Chair of the Division Vegetables, Roots and Tubers (2022-2026). He has been an active member of the Scientific Committees for all recent ISHS symposia on Soilless Culture and Hydroponics, Innovation and New Technologies in Protected Cultivation (GreenSys) and Product Quality in Fruits and Vegetables. He was co-convener of the last International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation in Germany (2025), the last two Southeastern and Eastern Europe Symposia on Vegetable and Potatoes in Greece (2026) and Romania (2023), and is currently co-convener of the next Southeastern and Eastern Europe Symposium on Vegetables and Potatoes in Lithuania (2029).

Prof. Dr. Zhen-Hai Han (China)

Zhen-Hai is currently Professor within the College of Horticultural Science at China Agricultural University in Beijing, China. He is an active member of the Chinese Society for Horticultural Science, where he held the position of Vice-President on two occasions, and was ISHS Council member for China from 2008-2023. Over the past ten years, he was a convener or co-convener for the First International Apple Symposium (2016), the II International Symposium on Beverage Crops (2018), the III International Symposium on Fruit Culture along Silk Road Countries (2023), and the International Symposium on Recent Advances in Horticulture in East Asia, Southeast Asia and the Pacific (IHC2026). In



> Zhen-Hai Han

addition, he has been a member of the International Advisory Committees of the 30th and 31st International Horticultural Congresses (IHC2018 and IHC2022).

Prof. Dr. Yüksel Tüzel (Turkey)



> Yüksel Tüzel

Yüksel is currently Professor, Protected Cultivation, within the Faculty of Agriculture, at Ege University, Turkey. Her key areas of expertise include protected cultivation, vegetable production and sustainable production. For over three decades she has been actively involved in the organisation and delivery of multiple ISHS symposia on protected cultivation, greenhouse technology, soilless growing media, ornamental plant production, biodiversity and organics. She was President of the 30th International Horticultural Congress in Istanbul (IHC2018) and was elected President of ISHS from 2018-2022. In addition, Yüksel has held numerous positions within ISHS, where she was Chair of ISHS Working Group Protected Cultivation in Mild Winter Climates (2001-2006) and Vice-Chair of ISHS Commission Protected Cultivation (2006-2010).

Prof. Dr. Cristos Xiloyannis (Italy)



> Cristos Xiloyannis

Cristos is a retired Professor of General Arboiculture and Tree Crops at the University of Basilicata in Italy. He is an internationally recognised authority in fruit crop physiology and management, and until recently, was an active member of the Italian Society for Horticultural Science (SOI). His research activities have addressed issues of ecophysiology, irrigation, sustainability, adaptation, and mitigating the impacts of climate change on fruit growing. He has served as a convener or co-convener for several ISHS symposia including the XIV International Symposium on Apricot Breeding and Culture (2008), the VIII International Peach Symposium (2013), the IX International Symposium on Irrigation of Horticultural Crops (2019) and is co-convener of the XII International Symposium on Kiwifruit in 2027. He was Chair of ISHS Working Group Water Relations in Woody Crops (1996-2003).

ISHS Horticulture Innovation Award

FloraPulse Co.

The fundamental goal of irrigation is to maintain a crop at or near the optimal water status required for optimal yield, quality or manageability. However, it's difficult for growers to reach that goal without knowing the water stress that a plant is actually experiencing. While most growers use indirect estimates such as soil moisture (supply) or evapotranspiration models (demand) to guide irrigation, only a very small number of growers use any direct measurements of the soil-plant-atmosphere system and even fewer use any measures of the plant itself, such as growth measurements, dendrometers (organ shrinking and swelling) remote



Abe Stroock



Mike Santiago



Alan Lakso

> FloraPulse Co.

sensing or direct measurement. Beginning in 2007 at Cornell University, USA, the founders of FloraPulse developed and validated a tiny sensor that can be embedded directly inside plants to monitor the water potential. Using MEMS (microelectromechanical systems) and nanotechnology, this microtensiometer is embedded in the stem xylem and measures the tension (negative pressure) in the plant's vascular system. A continuous datastream is read by a data logger that wirelessly transmits the water stress readings to the cloud and a dashboard for real-time monitoring. This allows the grower, consultant or researcher to see what is happening every day, and to respond as needed with an appropriate irrigation decision. The sensor

is best suited for perennial crops such as fruit and nut crops and forest or ornamental trees or shrubs due to minimum stem size needed to avoid tissue damage at the time of installation.

Prof. Dr. Mahmoud A. Sharafeldin (Egypt)

Mahmoud is currently a professor within the Medicinal and Aromatic Plants Research Department, Pharmaceutical and Drug Industries Research Institute, National Research Centre (NRC), in Cairo, Egypt. For over two decades he has been working on saffron, a highly valued spice that also possesses significant medicinal value. Over multiple growing seasons, Mahmoud and his research



> Mahmoud A. Sharafeldin

team have been able to produce saffron flowers with an augmented number of stigmata (4, 5, 6, 7, 8, and 9), thereby effectively tripling the yield. However, and perhaps even more significant, through the use of PFAL (plant factories with artificial lighting) technology, flower production per square metre has increased more than 15-fold compared to traditional open-field saffron production. Combining the two innovative technologies (increasing the number of stigma per flower and production per m²), could see yields increase by 32 to 55 times, transforming the traditional culinary use of saffron and paving the way for its use in medicinal settings. Mahmoud is currently the elected Chairperson of ISHS Working Group Saffron. ●

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> It's time to get off the hamster wheel

Ted DeJong, ISHS Vice-President in charge of Scientific Programs



> Ted M. DeJong

Metaphorically, the term “hamster wheel” describes a continuous, repetitive cycle in which a person feels trapped, often performing tedious or unfulfilling tasks without making meaningful progress. I have been in academia for more than fifty years and one of the mantras of academia during that entire time has been “publish or perish”, which is taken to mean, success in academia is measured by publishing research papers in academic journals in order to document scientific success. Over time, people recognized that not all publications had the same scientific value, and papers published in certain journals were more highly valued than papers published in “lesser” journals. This was mainly judged based on the reputation of a journal, often related to the reputation of the scientific society that managed the publication of the journal.

The metric trap: impact factors and commercial publishers

With the advent of computer technology that was able to track citations of papers in all, or most, of the journals published in a particular field, the notion of “impact factor” was developed based on metrics used to measure the importance and influence of a journal, based on the number of citations received by articles published by that journal over time. This tended to decrease the importance of journal societal affiliation on the reputation of a journal compared to the journal’s calculated impact factor. There are numerous flaws in the calculation of impact factors, one of which is that papers published in narrowly defined fields with relatively few scientists who publish and cite papers in that field will never have as many citations as papers published in more broader fields that are of interest to larger numbers of scientists.

The advent of impact factors gave rise to many “for-profit” scientific publishers that are not associated with scientific societies. These “for-profit” publications generally use similar “peer-review” mechanisms for screening and editing the papers that they publish. Those peer-review mechanisms often rely on free labor in the form of unpaid academic scientists who do their work based

on incentives provided by academia that reward scientists for contributions to “the system” of academic publishing (number of papers written, reviewed and edited listed in their personnel evaluations). This practice is a “hold-over” from the previous system of societal journal publishing in which scientists provided these services for the benefit of their chosen scientific societies. The same services provided to unaffiliated scientific journals is essentially servitude for the benefit of a commercial publisher.

The rise of predatory solicitations

The next level of nonsensical, bordering on unethical scientific publishing, are predatory journals. These are journals that solicit papers just so that they can fill their journals, collect page charges, provide quick reviews and rates of acceptance. They often have trick mechanisms to increase their impact factors. Often, they are not looking for good science. I can get several solicitations for papers in any week. A few of my favorite recent solicitations are:

Sample 1 – Received July 8, 2026

Dear __,

We are re-sending this invitation as we have not yet received a response to our earlier email regarding your manuscript submission.

We honestly request you to be a part in the success of our Journal of __ which can be done only with your support. It would be very grateful if you could submit any kind of article on or before July 20, 2026.

We just need at least a single article from your end. Hope you spare your valuable time in supporting us with your kind contribution of the manuscript towards our Journal. If you are unable to submit a Research article by the given timeline, kindly send us 2 Page Editorial/Mini Review/Opinion.

Sample 2 – Medical journal solicitation

Dear __,

This journal invited you earlier but we got no response from your end, so it is taking liberty to reach you again with this request. Can you give a minute to discuss? On behalf of board members, we cordially invite you to submit a paper (like your previous publication: Using functional-structural plant models...) for the upcoming issue, as we are short on articles; we are planning to publish quality papers, and we believe that you are the right person to fulfil our issue.

If your answer is yes, please share the acceptance within 24-48 hours... Approaching Deadline: July 22, 2026 for the July issue. The reply is requested to avoid follow-ups. Regards, __

It is often difficult to distinguish the legitimacy of papers published in these types of journals from legitimate peer-reviewed journals. It is clear that some of these journals don’t understand that scientific research often takes months, if not years of planning, and that it is not possible to carry out and write a legitimate research paper within a few weeks.

System at a breaking point and personal metrics

In addition to questions of legitimacy and the sheer number of publications that are being submitted and then sent through the peer-review process, it is clear that the current publications process in science is approaching a breaking point. This has led to increasing reports of AI being used to write, review and edit the scientific papers that are being submitted and processed. Some scientists now question the whole process of scientific publishing and the future of academic research.

With the advent of “impact factors” has come the personal “impact factors” (Google Scholar “H-indices”) that are now readily available as a measure of a scientist’s personal “impact” on a field, further reducing the value of journal impact factors. Since a person’s H-index is based on how many times their papers have been cited in journals, regardless of journal impact factor, the incentives for selecting “high impact” journals has decreased.

The solution: reclaim publishing for scientific societies

One solution to addressing the impending problems emerging in the scientific publications system (i.e., increasing performance of tedious and unfulfilling tasks without making meaningful progress in the publications process) is to avoid subservience to independent, non-society affiliated publishing outlets that increasingly demand service from academics for their own economic benefit. Publishing through member-run scientific society publications not only provides some value back to one’s scientific society in the form of income to the society, but it may also provide a mechanism for upholding scientific values in the publication process. At least authors can feel some satisfaction in supporting their society, rather than lining the pockets of robber barons when publishing their research.

There are numerous publishers of horticultural journals. Several of those journals are associated with horticultural societies, most often national societies. But some prominent ones are not and it can be difficult to sort them out. For instance, *Scientia Horticulturae*, which has a name that identifies with other publications of ISHS such as *Acta*

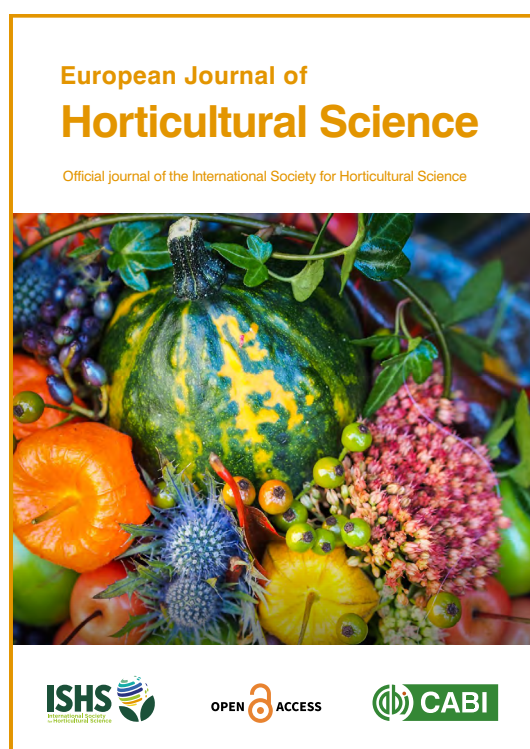
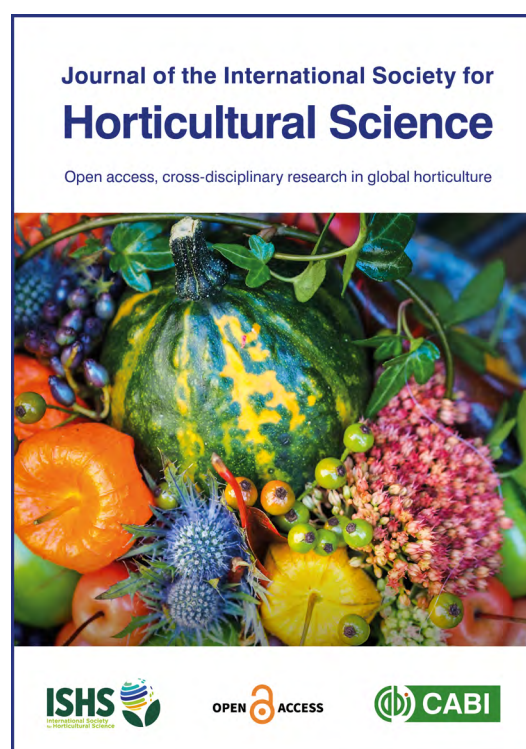
Horticulturae, *Chronica Horticulturae* and *Scripta Horticulturae*, had its origins in ISHS but has not been affiliated with ISHS for several decades. Now it is under the exclusive control of a commercial publishing company. Similarly, *Horticulturae* is also not affiliated with ISHS and is an MDPI on-line publication.

Publishing with ISHS: introducing JISHS

The International Society for Horticultural Science has been publishing the *European Journal of Horticultural Science* (EJHS) for several years, but the title of the journal did not make it clear that the scientific content of the journal was managed by ISHS. The renaming of the journal to the *Journal of the International Society for Horticultural Science* (JISHS) corrects that problem. The ISHS Board encourages all members of the Society to consider publishing their research or review papers in JISHS.

- Member-managed quality: scientific content is curated and managed entirely by members of ISHS;
- Non-profit publishing partner: published in partnership with CABI (an inter-governmental, not-for-profit organization established by a United Nations treaty-level agreement between 48 member countries);
- Member royalties and benefits: ISHS receives royalties; ISHS member corresponding authors receive a 25% discount on APCs.

Get off the “hamster wheel” driven by commercial, for-profit, publishing companies. Submit your papers to journals controlled by the scientific societies to which you belong.



> ISHS Young Minds Award winner summaries

Below is a selection of research summaries from winners of ISHS Young Minds Awards for best oral and poster presentations at ISHS symposia. To view other exciting research summaries by other winners, please visit www.ishs.org/young-minds-award

Effects of branch bearing status and irrigation on pistachio leaf photosynthetic performance



> Carlota Bernal Basurco

This study investigated the effects of crop load on the photosynthetic performance of pistachio trees subjected to different irrigation regimes during kernel development. The experiment was conducted in Woodland, California, during the summer of 2025. Three irrigation treatments were evaluated: high irrigation, supplying 100% of crop evapotranspiration requirements; medium irrigation, supplying 50% of crop evapotranspiration requirements; and low irrigation, in which only supplemental irrigation was applied. Measurements were taken on reproductive shoots carrying fruit clusters and on vegeta-

tive, non-bearing shoots during kernel filling and ripening. Midday stem water potential, gas exchange, A-Ci response curves, stomatal conductance, electron transport rate, photosynthetic capacity and leaf soluble sugar concentration were measured. Plant water status differed clearly among treatments. Trees under low irrigation reached the most negative stem water potential values, particularly in late August, while high and medium irrigation treatments showed similar values, suggesting that the medium treatment may have met actual tree water requirements. Branch bearing status also affected physiological responses. Vegetative shoots showed higher stomatal conductance (g_s), maximum electron transport capacity (J_{max}) and electron transport rate (ETRa) than reproductive shoots. Under low irrigation, vegetative shoots maintained greater stomatal opening and accumulated more soluble sugars. These responses may support osmotic adjustment and help protect photosynthetic activity during water stress. However, reproductive shoots probably allocated more carbohydrates to developed nuts, reducing the resources available for stress protection. Water stress reduced g_s and J_{max} while Rubisco carboxylation capacity (V_{cmax}) was not significantly affected. This indicates that, within the observed range of water

stress, photosynthesis was limited mainly by stomatal closure and restrictions in J_{max} rather than by direct damage to the carboxylation capacity. Overall, the findings suggest that vegetative branches are more resilient to water stress than reproductive branches during late kernel development. From a practical perspective, irrigation strategies could potentially be adjusted according to crop load: trees in low-crop years may tolerate greater water reductions, whereas heavily bearing trees could be more sensitive. The study also warns that measurements taken only on non-bearing branches may underestimate irrigation effects on whole tree performance. These results can contribute to more efficient orchard water management. Carlota Bernal Basurco won the ISHS Young Minds Award for the best oral presentation at the IX International Symposium on Almonds and Pistachios in Spain in May 2026.

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Vigorous rootstocks and microbial inoculation enhance organic pepper production



> Asmita Nagila

Organic pepper production faces challenges due to limited nutrient availability and increasing environmental stresses, particularly drought and heat in Southwest US. Developing sustainable, low-cost approaches that improve crop growth and stress tolerance while maintaining productivity are necessary for the long-term success of organic vegetable systems. This research evaluated two root-centered strategies for improving pepper under organic production conditions: grafting onto vigorous rootstocks and inoculation with beneficial plant growth-promoting rhizobacteria (PGPR). In the first study, the Italian pepper cultivar 'Mama Mia Giallo' was grafted onto four pepper rootstocks and

grown under contrasting organic fertility regimes. Scions when grafted to rootstocks CM-334 (a Mexican landrace resistant to Phytophthora root rot) and YC-207 (a breeding line developed at Texas A&M) performed well under reduced fertility conditions compared to non-grafted plants. YC-207 showed higher nitrate reductase activity, nutrient utilization efficiency, maintenance of gas exchange activities and lower malonaldehyde content, all of which are tolerance traits to reduced fertilization and natural heat stress conditions in greenhouses. The following study investigated the potential of a commercial PGPR to alleviate water stress in three pepper genotypes. Water deficit significantly

reduced plant growth, physiological performance and biochemical activity across all genotypes. However, microbial inoculation partially mitigated water deficit effects by maintaining plant water status, gas exchange activities, ionic balance and antioxidant activities, primarily through modifying root architecture. Responses varied among genotypes, with the jalapeño breeding line Jal46 exhibiting drought tolerance to some extent, while the heirloom cultivar 'Corne

di Toro' was the most susceptible. Overall, these studies highlight the potential of integrating grafting and microbial inoculation to improve nutrient-use efficiency and stress tolerance in peppers. These approaches offer practical low-cost tools for strengthening the sustainability and profitability of organic vegetable production under organic and low-input conditions.

Asmita Nagila won the ISHS Young Minds Award for the best oral presentation at the

X Southeastern and Eastern Europe Symposium on Vegetables and Potatoes in Greece in May 2026.

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Effects of cold plasma treatment on germination dynamics and early seedling development in common bean (*Phaseolus vulgaris* L.)



> Ovidia Agapie

Ovidia Agapie is a research scientist at the Vegetable Research and Development Station Buzău, Romania. Her research focuses

on plant genetic resources, breeding and the evaluation of innovative technologies for sustainable crop production.

The award-winning study investigated the effects of cold plasma treatment on seed germination and early seedling development in common bean (*Phaseolus vulgaris* L.). Seeds were treated with cold plasma and subsequently evaluated for germination dynamics, germination percentage, seedling vigor and early growth parameters. The results showed that cold plasma treatments of 6-9 minutes were the most effective, accelerating germination and increasing the germination rate after three days from 34.7% in the untreated control to over 60%, while promoting seedling vigor and early growth. The research was carried out within a project funded by the Romanian Ministry of Agriculture and Rural Development (MADR) and supports ongoing

efforts to develop sustainable technologies capable of improving crop performance while reducing environmental impact. These findings highlight the potential of cold plasma as an innovative seed treatment technology for sustainable horticultural production. Ovidia Agapie won the ISHS Young Minds Award for the best poster presentation at the X Southeastern and Eastern Europe Symposium on Vegetables and Potatoes in Greece in May 2026.

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Optimization of a cost-effective culture medium for mass production of an endophytic antagonistic strain of *Aureobasidium pullulans*



> Giulia Remolif

Giulia Remolif is a PhD student in Plant Pathology at the University of Torino, Italy. Her research focuses on postharvest fruit diseases. Currently, she is investigating alternative control strategies to synthetic fungicides, mainly focusing on biological control. The development of a biocontrol agent (BCA) involves several steps, starting from the screening and selection of effective micro-

organisms, through to mass production and formulation. An endophytic *Aureobasidium pullulans* strain, isolated from Italian apples, has shown promising activity against several postharvest pathogens. This study focused on developing a low-cost culture medium for the mass production of the selected strain, using agri-food industry by-products and inexpensive commercial substrates. Sugarcane molasses, apple bagasse and apple peel flour were evaluated as carbon sources, while whey, aquafaba, soy protein isolate and urea were tested as nitrogen sources. A medium containing apple peel flour (35 g L⁻¹) and soy protein isolate (3 g L⁻¹) supported *A. pullulans* growth comparable to that obtained with the laboratory medium Malt Extract Broth (MEB). Similar growth was also achieved using two independent batches of the selected substrates. The optimized medium was then scaled up in a 2-L laboratory bioreactor. After 48 h, the viable population reached a value comparable to shake-flask cultures. During the process, dissolved oxygen decreased while pH slightly increased.

Glucose, fructose, sucrose and proteins were also monitored, revealing their consumption dynamics. Finally, efficacy trials on apple fruit demonstrated that cells produced in the optimized medium retained their antagonistic activity against *Colletotrichum* sp. and *Botrytis cinerea*, performing comparably to MEB-grown cells. Overall, this work has demonstrated that agri-food by-products and cost-effective commercial substrates can support efficient BCA production while maintaining biocontrol efficacy, thereby providing a promising basis for industrial-scale application and contributing to waste valorisation and the circular economy.

Giulia Remolif won the ISHS Young Minds Award for the best oral presentation at the VIII International Symposium on Postharvest Pathology in Norway in May 2026.

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Optimizing transplanting windows to reduce *Tuta absoluta* losses in commercial processing tomato production in northern Nigeria



➤ Salome Ayekpua Arewa

In sub-Saharan Africa, the processing industry faces catastrophic losses due to the invasive tomato pinworm (*Tuta absoluta*), a pest whose development accelerates under high temperatures. To establish practical crop scheduling interventions, this study evaluated how different transplanting periods interacted with the arrival of the pest, final output and fruit quality parameters. Field data were gathered during the 2024-2025 dry season across 31 large-scale commercial blocks

in Kaduna State, Nigeria, evaluating three distinct planting intervals: early (November 5-21), mid (November 23-December 7) and late (December 9-19).

Climatic tracking via on-site sensors revealed an increasingly hostile microclimate as the season progressed, with weekly ambient average temperatures climbing to 30.9°C and the vapor pressure deficit reaching a maximum of 3.50 kPa. This intensely arid environment heavily compressed the pest's lifecycle, leading to devastating consequences for delayed crops. The timing of the initial transplanting exerted an exceptionally strong influence on crop performance ($p < 0.001$). Fields established during the early window achieved a mean yield of 42.8 t ha⁻¹. In contrast, late-transplanted fields suffered a catastrophic yield reduction (82.5%), dropping to a meager 7.5 t ha⁻¹.

The specific developmental stage of the crop at the moment of pest colonization proved critical to final productivity. Infestations occurring at the bloom stage caused severe flower drop, limiting final yields to just 12.6 t ha⁻¹, whereas fields infested post-ripening produced 45.2 t ha⁻¹. Spatial tracking also revealed a notable edge effect, with field

borders exhibiting significantly lower output (32.8 t ha⁻¹) than the central core zones (48.8 t ha⁻¹). Meanwhile, raw material processing quality remained stable, as soluble solids (°Brix) did not fluctuate across the temporal windows.

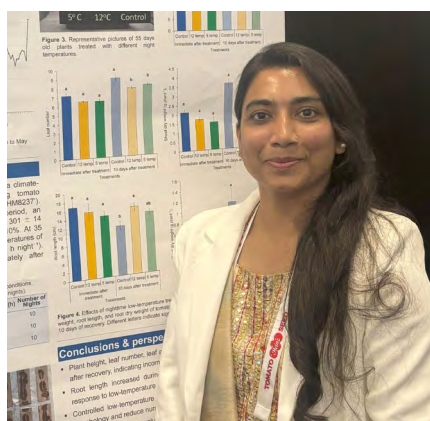
Ultimately, these findings demonstrate that optimizing the initial planting date serves as a powerful, low cost cultural barrier. By completing field establishment before late November, commercial producers can effectively shield the sensitive reproductive phase from peak pest pressure, ensuring stable yields for industrial processing without sacrificing fruit quality.

Salome Ayekpua Arewa won the ISHS Young Minds Award for the best oral presentation at the XVIII International Symposium on Processing Tomato in USA in June 2026.

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Developing resilient tomato seedlings through pre-transplant chilling hardening in controlled environments



➤ Nazmin Akter

Nazmin Akter is a PhD student in the Controlled Environment Agriculture (CEA) Lab in the Department of Plant Sciences at the University of California, Davis, USA, under the supervision of Dr. Laura Cammarisano and Dr. Md. Shamim Ahamed. Her research focuses on developing practical and sustainable stress-hardening strategies to improve transplant resilience and crop establishment

in processing tomato production. California produces more than 90% of the processing tomatoes grown in the United States, and successful crop establishment is critical to maintaining productivity, especially during early-spring planting when seedlings are often subject to suboptimal temperatures. Nazmin's doctoral research aims to develop and validate chilling-hardening protocols that enhance seedling resilience, improve transplant establishment, increase tolerance to post-transplant environmental stress and reduce energy costs associated with nighttime heating in the nursery greenhouse.

Initial studies were conducted to evaluate the effects of exposing tomato seedlings to night temperatures of 12 and 5°C for 10 consecutive nights during the nursery stage. Measurements were carried out on morphological parameters, chlorophyll content, membrane stability, chlorophyll fluorescence, stomatal conductance and root development. The preliminary results showed that chilling temporarily reduced shoot growth and physiological performance, but the seedlings recovered after 10 days under optimal

conditions. Seedlings exposed to moderate chilling (12°C) developed longer roots during recovery and maintained a more compact canopy with fewer leaves, characteristics that may improve compatibility with automated transplanting systems and enhance transplant performance.

Nazmin Akter won the ISHS Young Minds Award for the best poster presentation at the XVIII International Symposium on Processing Tomato in USA in June 2026. She also received the Adopt-a-Scientist Travel Award sponsored by The Morning Star Company and the California Tomato Research Institute (CTRI) to attend the symposium.

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Comparison of intercepted light per plant canopy between the methods using Monsi-Saeki theory and 3-D depth camera: a case study involving sweet pepper, tomato and strawberry production



> Masaru Homma

The amount of sunlight captured for photosynthesis is important for plant growth and function. Plant-intercepted sunlight (IL, MJ m⁻²) can be calculated by multiplying total daily sunlight (MJ m⁻²) by fraction intercepted (IL_{fraction} %). IL_{fraction} can be determined

using the Monsi-Saeki theory or the spatial image method. While researchers use these methods concurrently under the premise that they will yield similar IL_{fraction} values, the IL_{fraction} gaps between methods remain unclear. We aimed to compare the IL_{fraction}, IL, and light-use efficiency (total dry matter/cumulative ILs) values obtained using the Monsi-Saeki theory and spatial image method, focusing on tomato, sweet pepper (*Cap-sicum annuum*), and strawberry (*Fragaria × ananassa*) plants grown hydroponically in a greenhouse. Our results reveal large IL_{fraction} gaps between methods, resulting in remarkable IL gaps. IL_{fraction} and IL values obtained using spatial images were consistently lower than those obtained using Monsi-Saeki theory. Monsi-Saeki theory and spatial image methods thus yielded different crop-specific light-use efficiency values, indicating method-dependent differences in photosynthetic ability. Our findings indicate that plant-intercepted sunlight should be calculated by

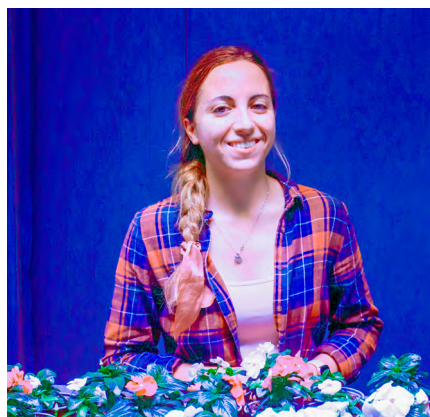
carefully selecting either Monsi-Saeki theory or the spatial image method. Concurrent use of both methods forces researchers to accept misevaluations in IL_{fraction}, IL, and light-use efficiency.

Masaru Homma won the ISHS Young Minds Award for the best poster presentation at the International Symposium on Innovative Technologies and Production Strategies for Smart Greenhouse at IHC2026 in Japan in August 2026.

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Targeted light treatments as a strategy to boost anticancer alkaloid accumulation in *Catharanthus roseus*: a comprehensive analysis



> Marisa Lourenço

Vertical farming enables precise control of the plant growth environment, creating opportunities not only to increase crop productivity but also to enhance the production of high-value plant compounds. This is particularly relevant for medicinal plants such as *Catharanthus roseus*, which naturally pro-

duces the anticancer alkaloids vinblastine (VLB) and vincristine (VCR). However, these compounds occur at extremely low concentrations in the plant, limiting their production efficiency. In this study, we investigated whether targeted ultraviolet (UV) radiation could be used to enhance anticancer alkaloid production in three *C. roseus* cultivars without compromising plant biomass. Two complementary approaches were evaluated: UV-A applied during the production cycle and short end-of-production UV-C treatments. The response to UV-A was strongly cultivar-dependent, with 'Cora Red' showing the greatest response. Four hours of daily UV-A exposure maximized anticancer alkaloid production in this cultivar, increasing the yield of VLB and VCR per plant 2.3-fold. In contrast, end-of-production UV-C promoted VLB and VCR accumulation across all three cultivars, with a 60-min treatment increasing anticancer alkaloid yields without compromising biomass. Both UV strategies were associated with increased lipid peroxidation,

while total antioxidant capacity remained largely unchanged, suggesting that mild UV-induced oxidative stress may be associated with alkaloid elicitation. Further work is required to establish the underlying signaling mechanisms.

Marisa Lourenço won the ISHS Young Minds Award for the best oral presentation at the II International Symposium on Advances in Vertical Farming at IHC2026 in Japan in August 2026.

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“Alternative” smoothies and gut health: comparing plant-based dairy milk alternatives and dairy milk



► Anuruddhika Udayangani Rathnayake

Consumer demand for plant-based dairy milk alternatives (PBDMA) has increased due to concerns about environmental sustainability, animal welfare and health. Although widely used as dairy substitutes, their capacity to support beneficial gut microorganisms remains poorly understood. As part of her PhD research at the University of Queensland, Australia, Anuruddhika has investigated how dairy milk, a range of PBDMA, and their combinations with strawberries, influence probiotic growth and metabolism. Strawberries are rich in bioac-

tive compounds associated with numerous health benefits, yet little is known about their interactions with probiotics in complex food matrices such as smoothies. To address this gap, Anuruddhika compared probiotic viability in three dairy milks, nine PBDMA and strawberry smoothies prepared with dairy milk, PBDMA, or water as a control over 24 and 48 h. All formulations supported probiotic survival and growth. Most fermentation activity occurred within the first 24 h, after which bacterial counts, acidity and metabolite profiles largely stabilised. Dairy milks and PBDMA fermented alone generally promoted stronger bacterial growth than formulations containing strawberry, indicating that strawberry addition moderated rather than enhanced probiotic activity. To gain a greater insight, untargeted metabolomic analyses were conducted on selected dairy milk, PBDMA and strawberry smoothie samples. Full-cream dairy milk exhibited changes in 257 metabolites after 24 h of fermentation, compared with 153 metabolites in the corresponding strawberry smoothie. Similarly, soy milk and a soy milk-based strawberry smoothie showed alterations in 93 and 36 metabolites, respectively. A slowly fermenting strawberry-water control confirmed that the milk component, rather than the fruit

itself, was the primary driver of microbial activity. Strawberry-mediated effects were highly matrix dependent. In dairy milk, strawberries attenuated pathways associated with protein metabolism, whereas in soy milk they redirected fermentation towards flavonoid and isoflavonoid metabolism. Only nine metabolites were consistently altered across both dairy and soy fermentations, highlighting distinct biochemical transformations in different food matrices.

Anuruddhika Udayangani Rathnayake won the ISHS Young Minds Award for the best oral presentation at the XI International Symposium on Human Health Effects of Fruits and Vegetables (FAVHEALTH2026) at IHC2026 in Japan in August 2026.

► Contact

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Utilization of whole Chinese quince fruit in food applications: effects of processing conditions on procyanidins and cyanogenic compounds



► Kota Higuchi

Chinese quince (*Pseudocydonia sinensis*) has long been used as a traditional medicine in Japan because of its antitussive and expectorant properties. The fruit is rich in functional compounds, including procyanidins (PCs), which have been reported to exhibit antioxidant and anti-influenza virus activities, and it may contribute to the prevention of atherosclerosis. In addition, dietary fiber-related components, such as pectin and

non-extractable procyanidins (NEPCs), have been reported to exhibit bile acid-binding activity which may contribute to a reduction in cholesterol. However, during processing of the fruit, only the pulp is generally utilized, whereas the peel, core and seeds, which also contain abundant functional compounds, are discarded. To reduce waste and to gain additional health benefits, whole-fruit utilization is worth considering. On the other hand, the seeds contain amygdalin, a cyanogenic glycoside that releases toxic hydrogen cyanide upon hydrolysis, which poses a challenge for whole-fruit utilization. This study was conducted to explore a safe and effective way of whole-fruit utilization for Chinese quince. Samples were prepared from different fruit parts, as well as from fruits subjected to processing treatments such as boiling and fine milling, and their effects on procyanidins, amygdalin and cell wall fiber contents, as well as bile acid-binding activity, were evaluated. The results showed that the peel, core and seeds contained 2.4, 6.3, and 4.2-fold higher levels of procyanidins, respectively, than the pulp. In addition, these parts exhibited higher bile acid-binding activity

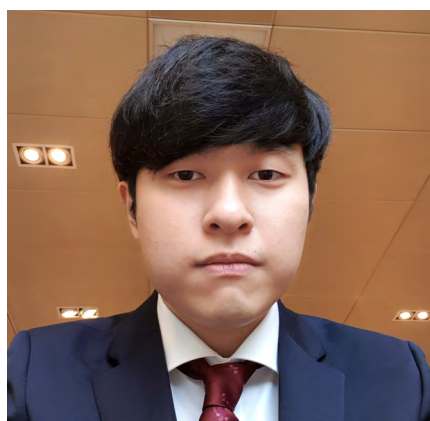
than the pulp. Therefore, whole-fruit utilization, rather than using only the pulp, has the potential to increase the intake of beneficial bioactive compounds. While the amygdalin content in the whole fruit was estimated to be 31.95 mg 100 g⁻¹ FW, a decrease in amygdalin content was observed in the fine-milled samples. Overall, these findings suggest that whole-fruit utilization with fine milling can improve the safety of Chinese quince while retaining its functional properties.

Kota Higuchi won the ISHS Young Minds Award for the best poster presentation at the XI International Symposium on Human Health Effects of Fruits and Vegetables (FAVHEALTH2026) at IHC2026 in Japan in August 2026.

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CRISPR/Cas9-based functional validation of transcriptome-derived candidate genes for capsaicinoid accumulation in *Capsicum annuum*



> Jung-Min Kim

In this study, we investigated genes influencing capsaicinoid accumulation in pepper (*Capsicum annuum*) by combining transcriptome analysis with functional validation. Capsaicinoids are responsible for pepper pungency and accumulate mainly in subcuticular cavities of the septum epidermis.

Although several genes involved in their biosynthesis have been characterized, the processes supporting their storage remain less understood. We integrated publicly available transcriptome datasets from peppers with contrasting pungency to identify candidate genes associated with capsaicinoid accumulation. Differential expression and gene co-expression network analyses guided candidate selection, followed by functional evaluation using virus-induced gene silencing and CRISPR/Cas9-based gene editing. Among the candidates, we focused on *CaGPAT6L*, a putative glycerol-3-phosphate acyltransferase associated with cutin biosynthesis. Silencing and editing this gene reduced capsaicinoid content, supporting its involvement in capsaicinoid accumulation. Its septum-enriched expression and predicted protein features further suggested a connection with cutin-related processes in capsaicinoid-producing tissues. Based on these findings, we propose that *CaGPAT6L* may contribute to capsaicinoid storage through

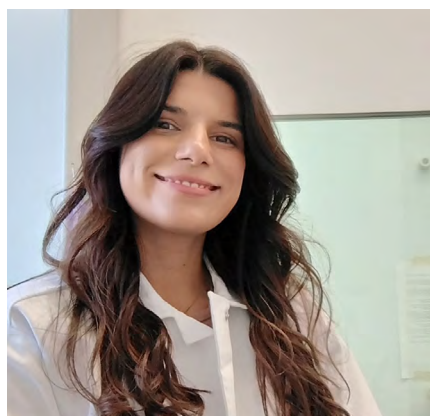
its involvement in cutin-associated lipid metabolism. Cutin-related processes may help maintain the tissue structures in which capsaicinoids accumulate. Further biochemical and structural analyses are needed to clarify this relationship and test the proposed model.

Jung-Min Kim won the ISHS Young Minds Award for the best oral presentation at the International Symposium on Vegetable Breeding for Sustainable Field and Greenhouse Production through Modern Selection Techniques and Molecular Tools (Breed-Vegs2026) at IHC2026 in Japan in August 2026.

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Enhancing nutraceutical traits in *Brassica oleracea* L. for functional food production



> Gresheen Garcia

Gresheen Garcia is a PhD student in Biotechnology at the University of Catania, Italy. Her research focuses on the valorization of *Brassica* genetic resources and on strategies to enhance nutraceutical quality, stress resilience and the potential use of vegetable crops for functional food production. As part of the EU-funded COUSIN project, she inves-

tigated the morphological and nutraceutical diversity of 29 *Brassica oleracea* accessions, including crop wild relatives (CWRs), landraces, commercial cultivars, composite cross populations (CCPs) and experimental F_1 hybrids developed at the UNICT-Di3A genbank. The study aimed to identify promising genetic resources combining valuable agronomic characteristics with high levels of health-related bioactive compounds. Plants were grown under certified organic conditions in Sicily, and morphological traits, glucosinolate profiles and antioxidant capacity were evaluated. A marked variation was observed among the different genetic materials. Total glucosinolate content ranged from 0.17 to 80.6 $\mu\text{mol g}^{-1}$ DW, with the F_{1_6} hybrid showing the highest concentration. Selected F_1 hybrids and CCPs were particularly rich in glucoraphanin, a precursor of the bioactive isothiocyanate sulforaphane, while crop wild relatives showed distinctive profiles characterised by compounds such as glucoiberin, glucobrassicinapin and sinigrin. Considerable variation was also observed

in antioxidant capacity. Overall, F_{1_6} , F_{1_1} and CCP_6 emerged as particularly promising genotypes, highlighting the value of CWR introgression and genetically diverse breeding populations for developing *Brassica* crops with enhanced nutraceutical properties.

Gresheen Garcia won the ISHS Young Minds Award for the best poster presentation at the International Symposium on Vegetable Breeding for Sustainable Field and Greenhouse Production through Modern Selection Techniques and Molecular Tools (Breed-Vegs2026) at IHC2026 in Japan in August 2026.

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Biostimulant effects of *Moringa* spp. extracts on baby leaves of *Brassica oleracea* L. var. *italica* Plenck



► Donata Arena

Donata Arena is a postdoctoral researcher at the Department of Agriculture, Food and Environment (Di3A), University of Catania, Italy. She holds a PhD in Biotechnology, for which she studied the morphological, biochemical and genetic characteristics of traditional vegetable crops, with a focus on the

valorization of plant genetic resources and the development of novel foods.

Among her recent research activities, she investigated the use of *Moringa* leaf extracts as natural biostimulants in baby-leaf production. Three extracts from *Moringa hildebrandtii*, *M. stenopetala* and *M. oleifera* were tested on Sicilian 'Broccolo nero', a sprouting broccoli belonging to *Brassica oleracea* var. *italica*. The experiment was carried out under organic greenhouse conditions, comparing treated plants with untreated controls. The extracts affected both plant growth and the phytochemical composition of the baby leaves. *M. oleifera* increased fresh weight and gave the highest antioxidant activity, while *M. hildebrandtii* increased total phenolic content. All three treatments reduced root area and modified the glucosinolate profile, with a decrease in neoglucobrassicin and an increase in aliphatic glucosinolates, particularly glucoraphanin and glucoerucin, together with their derived isothiocyanates. Differences were also observed in volatile

compounds, especially after treatment with *M. stenopetala*. These results show that extracts from different *Moringa* species can produce different responses in baby-leaf broccoli and may represent useful natural inputs for sustainable vegetable production. Donata Arena won the ISHS Young Minds Award for the best oral presentation at the International Symposium on Diversification of Vegetable Production and New Growing Techniques for Sustainable Farming Systems (GreenVegs2026) at IHC2026 in Japan in August 2026.

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Next-generation monitoring of fruit pests: selective attractants and automated trapping for *Drosophila suzukii*



► Marko Bjeljac

In this study, Marko investigated an integrated approach to improve the monitoring of *Drosophila suzukii*, an important pest of soft and stone fruits, whose presence in ripening fruit makes reliable population assessment particularly important for timely pest management. The work combined selective attractants and automated insect

detection technology, with the aim of developing a more efficient and targeted monitoring system. Two yeast-derived supernatants, obtained from *Hanseniaspora uvarum* and *Saccharomycopsis vini*, were evaluated against a commercial lure for their selectivity to attract *D. suzukii* in sweet cherry orchards during the 2024 and 2025 growing seasons. Field experiments were conducted at the Laimburg Research Centre in South Tyrol, Italy, with repeated trap exposures during fruit development. The study further explored a smart trap developed by the Laimburg Research Centre and the Free University of Bolzano with the support of Irideon SL. The smart trap prototype combines an attractant-based trapping chamber supplied with a fan and an opto-electronic sensor, allowing insects entering the device to be detected through changes in optical signals generated by their wing movements. These signals can then be processed to distinguish *D. suzukii* from the morphologically similar species such as *Drosophila melanogaster*. To improve the reliability of automated identification, flight recordings from both species were obtained under controlled laboratory

conditions while considering differences in sex, age and environmental conditions such as temperature and humidity. The resulting recordings were then used to develop the classification system based on characteristics associated with insect wingbeat patterns. Preliminary results demonstrated the potential of the technology to differentiate between the species, thereby providing a promising step towards autonomous pest monitoring.

Marko Bjeljac won the ISHS Young Minds Award for the best oral presentation at the International Symposium on Sustainable Production Systems in Temperate Tree Crops at IHC2026 in Japan in August 2026.

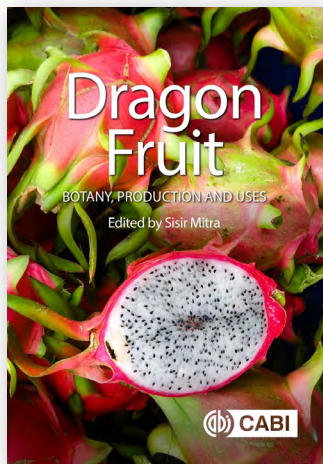
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> New books, websites

Book reviews

The books listed below are non-ISHS-publications. For ISHS publications covering these or other subjects, visit the ISHS website www.ishs.org or the *Acta Horticulturae* website www.actahort.org



Mitra, S. (2024). *Dragon Fruit: Botany, Production and Uses* (Wallingford, Oxfordshire, UK; Boston, MA, USA: CAB International), pp.264. ISBN 978-1-80062-313-2 (hardback) / 978-1-80062-314-9 (ePDF) / 978-1-80062-315-6 (ePub). € 157.5 / \$178.50 (hardback) / € 156 / \$176.80 (eBook).

A 25% discount will be received by entering the code "ISH25" when ordering through <https://www.cabidigitallibrary.org/doi/book/10.1079/9781800623156.0000>

The book "Dragon Fruit: Botany, Production and Uses", edited by Sisir Mitra, provides a comprehensive compilation of the latest information and scientific knowledge on dragon fruit, making it valuable to a wide range of readers. Twenty authors from eight countries have contributed to this book by sharing their knowledge and expertise on this crop, which has gained a lot of interest worldwide over the past 20 years, due to its unique appearance, nutritional value and health benefits.

The book provides detailed information on origin, taxonomy and biology, cultivar diversity, as well as advances in breeding, propagation and biotechnology. Fruit composition and unique bioactive compounds in dragon fruit are described, while opportunities for value adding and processing are explored for products such as fresh-cut fruit, dried products, juice, wine, jams, yoghurt, ice cream, and various food additives.

The chapter dedicated to orchard management provides practical, step-by-step guidance for successful production of high-quality fruit. Topics covered include site selection,

plant density, land preparation, planting, trellising systems, nutrition, water and weed management, training and pruning, flower and fruit quality management, as well as intercropping options and techniques for off-season production. Furthermore, a chapter on greenhouse cultivation provides valuable information on protected production systems that can support profitable dragon fruit cultivation under less favourable environmental conditions.

A thorough overview of the key pests and diseases affecting dragon fruit is presented, describing their symptoms, causal agents, epidemiology and integrated management strategies, with attention to physical, cultural, biological and chemical control options.

The book also discusses the importance of adequate postharvest management for this highly perishable fruit, including fruit maturity indices, optimal harvest timing, grading, packaging, pre-cooling and storage requirements. Various postharvest technologies and treatments aimed at reducing losses, maintaining visual quality, reducing postharvest diseases, and extending shelf life are also reviewed.

Each chapter is followed by a list of references, allowing readers to obtain more detailed information on the individual topics.

With this comprehensive look at dragon fruit, this book serves as a great reference for researchers, plant breeders, plant physiologists, food technologists, growers, horticultural advisors, and anyone interested in the cultivation, marketing and consumption of dragon fruit.

*Reviewed by Regina Cronje,
Agricultural Research Council-Tropical and
Subtropical Crops, South Africa*

Mitra, S., ed. (2025). *Annonas: Botany, Production and Uses* (Wallingford, Oxfordshire, UK; Boston, MA, USA: CAB International), pp.248. ISBN 978-1-80062-760-4 (hardback) / 978-1-80062-761-1 (ePDF) / 978-1-80062-762-8 (ePub). € 160 / \$180

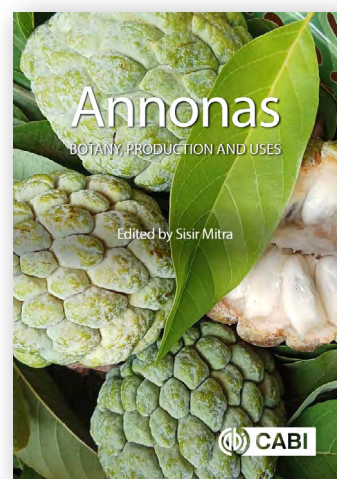
A 25% discount will be received by entering the code "ISH25" when ordering through <https://www.cabidigitallibrary.org/doi/book/10.1079/9781800627628.0000>

"Annonas: Botany, Production and Uses", edited by Dr. Sisir Mitra, is a glorious intro-

duction to these wonderful subtropical/tropical fruits. In twelve chapters, Dr. Mitra covers the gamut of the *Annonaceae* family's edible *Annona* genus. There are detailed descriptions of the major species with bright, clear photographs provided by many of the book contributors. This is the best collection of images of the *Annona* species, each of which is accompanied by a description and other varietal information. The chapters go on to describe the ecology of the different species, the nutritional composition of the different fruits and their current and potential processing uses. The sections on breeding and biotechnology tools for breeding and propagation are clear. The section on flowering, pollination and fruit set is thorough. The sections on pests and diseases are comprehensive but somewhat generic, as they must be, with so many different growing conditions and environments leading to a wide range of different issues. Orchard management is dealt with in a relatively brief fashion, although the specific needs of some species are highlighted. The chapter on postharvest management is much more specific, especially with regard to the requirements of different cultivars.

The chapters are relatively short and easy to read. However, each chapter has several succeeding pages of references that will enable interested readers to learn more on the topics covered in that chapter. Dr. Mitra has written many of the chapters, but he has also brought together a range of *Annona* experts to help him with their contributions.

*Reviewed by Ben Faber,
UC Cooperative Extension, USA*





➤ VIII International Symposium on Postharvest Pathology

Division Postharvest and Quality Assurance

#ishs_dphq

The VIII International Symposium on Postharvest Pathology took place from May 18-22, 2026, in Lofthus, Ullensvang, Norway, under the aegis of the International Society for Horticultural Science (ISHS) and the International Society for Plant Pathology (ISPP). Convener Dr. Jorunn Børve (NIBIO, Norway) organized the event in cooperation with researcher Emily Follett and Cathrine Lill Broch (both NIBIO). The scientific committee included Samir Droby, Agricultural Research Organization ARO, Israel, Kerry Everett, Plant & Food Research Group in the Bioeconomy Research Institute, New Zealand, Cheryl Lennox, Stellenbosch University, South Africa, Kari Peter, Pennsylvania State University, USA, Gianfranco Romanazzi, Marche Polytechnic University, Italy, and from NIBIO Arne Stensvand, Belachew Asalf Tadesse and Jorunn Børve.

The symposium theme “Plant to plate: integrated and innovative approaches for managing postharvest disease across the supply chain” attracted a range of researchers from multiple disciplines. In total there were 127 attendees, from 25 different countries. Attendees were welcomed on the night before the symposium opened with tradi-



➤ Panel debate about challenges in registration of biological control agents. From left to right: Davide Spadaro, University of Turin, Italy, Isabelle Pinzauti Babrzynski, representing the International Biocontrol Manufacturers Association (IBMA), Gianfranco Romanazzi from Marche Polytechnic University, Italy, Neus Teixido, IRTA, Spain, and Clara Montesinos, AgroFresh, Spain.

tional Hardanger fiddle music, folk dancing and locally produced cider and apple juice. There were four keynote speakers covering a range of topics, 55 oral presentations and 24 posters. Three additional virtual oral presentations were given due to unforeseen circumstances. On the first day, Simona Sanzani from the University of Bari, Italy, provided a holistic overview of postharvest handling and how to combine technologies from pre- to postharvest. The keynote was followed by

orals and posters focusing on related topics and alternative approaches to the use of synthetic fungicides.

At the end of the day, Gianfranco Romanazzi from Marche Polytechnic University, Italy, led a panel debate about challenges in the registration of biocontrol agents. Isabelle Pinzauti Babrzynski, representing the International Biocontrol Manufacturers Association (IBMA), gave an introduction to the debate. The audience appreciated the honest



➤ Participants of the symposium.



► Combined poster and oral discussion at the end of a session.



► The ISHS Young Minds Award committee was led by Dr. Cheryl Lennox (right), who also handed out the prize together with the Chair of ISHS Division Postharvest and Quality Assurance, Dr. Giancarlo Colelli (second from left), and the convener, Dr. Jorunn Børve (left) for the best oral presentation to Giulia Remolif (in the middle) and for the best poster to Justina Griauzdaitė (second from right).

discussion about how approval of biocontrol agents must follow the same rules as regular plant protection products in documenting residues, etc. and the challenges this presents.

The second day was focused on the postharvest management of apple diseases. A keynote address by Roland Weber, Esteburg Fruit Research and Advisory Centre, Germany, gave the audience an overview

of different apple storage diseases in relation to weather, fungicide use, and cultivar susceptibility. This was followed with oral presentations on specific apple diseases and a discussion focusing on the use of UV in packing lines.

In the afternoon, a technical tour of NIBIO Ullensvang was undertaken. Scientists at the research station and the local advisory service spoke about many aspects of fruit growing and the related sciences. In addition, participants had the option of going on a hike or visiting commercial orchards or cideries.

The third day was opened with a keynote by Cheryl Lennox from Stellenbosch University, South Africa, focusing on how to improve the long-distance shipment of commodities, in part by combining treatments. This theme of combining treatments was continued in both the oral and poster presentations afterwards.

The fourth keynote by Andrea Ficke, NIBIO, focused on sensors for detecting fungal pathogens. The following session was focused on sensors and ended with an engaging discussion about possibilities for the future.

The last session of the day was focused on gene regulation and molecular mechanisms. Last, but not least, managing diseases in vegetable and berry production was the focus of the final session on the fourth day.

An important take-home message from many of the presenters and the symposium as a whole was that a combination of treatments is needed to ensure attractive products at the consumer level. This is of particular importance when our reliance on the use of synthetic chemicals will need to be reduced in the future.

A new feature of this event was that each poster was assigned to a session, and both the oral and poster presenters were included in the discussion of each session. In order to promote the poster presenters more, the



► The field day was a visit to NIBIO Ullensvang where the scientists and the advisory service presented their work for the fruit industry in Norway.

posters could be viewed continuously in the back of the symposium room. During the coffee breaks directly before or after a session, the presenters of the associated posters were present at their poster ready to answer questions. The attendees also appreciated the use of a symposium app to follow updates, connect, and answer scientific questions related to their work. Contributions from students and early-career researchers were recognized through the ISHS Young Minds Awards for the best oral and the best poster presentation. The committee for the award was Cheryl Lennox and Arne Stensvand. The award for the best oral presentation was granted to Guilia

Remolif from the University of Turin, Italy, for her talk titled “Optimization of a cost-effective culture medium for mass production of an endophytic antagonistic strain of *Aureobasidium pullulans*”. The award for best poster presentation was given to Justina Griauzdaitė from Lithuanian Research Centre for Agriculture and Forestry, Institute of Horticulture, Lithuania, for her work titled “The propolis extracts as a bio-fungicide against raspberry mould”.

During the ISHS Business meeting, Kerry Everett was re-elected as the Chair of ISHS Working Group Postharvest Pathology. A proposal from Julia Meitz Hopkins to hold the IX International Symposium on Postharvest

Pathology in the Cape Town region of South Africa in November 2029 was endorsed by the meeting. ●

Jorunn Børve and Emily Follett

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> IX International Symposium on Almonds and Pistachios

Division Temperate Tree Nuts

#ishs_dnut

The IX International Symposium on Almonds and Pistachios was organized in Lleida, Catalonia, Spain, between May 3 to 7, 2026, by the Institute of Research in Agrifood and Technology (IRTA) under the auspices of the

International Society for Horticultural Science (ISHS). More than 300 participants from 18 countries attended the event, sharing the latest advances, research findings, and practical experiences in almond and pistachio

production systems, physiology, irrigation, breeding, pests and diseases, and postharvest innovation.

The symposium hosted several thematic oral sessions, covering key topics such as: new



> Participants of the symposium.



► Dr. Giulia Marino, Chair of ISHS Division Temperate Tree Nuts, presenting the ISHS medal award to Conveners Xavier Miarnau (left) and Joaquim Bellvert (right).

advances in almond and pistachio breeding and genetics; sustainable orchard management and agroecological intensification; water and soil management under climate change conditions; physiology, phenology and stress responses; pest and disease management; and nut quality, postharvest handling and processing technologies. Each session featured keynote presentations by leading international experts, highlighting recent breakthroughs in areas such as genetic improvement for resilience and quality,



► Field day at the experimental station of IRTA.

irrigation management, and emerging processing technologies for value addition. The keynote speakers included: Prof. Salas-Salvadó, Dr. Joan Girona, Prof. Louise Ferguson, Dr. Pere Arús, Prof. Patrick Brown and Prof. Themis J. Michailides.

Current research on cultivar performance, rootstock-scion interactions, and adaptation of almond and pistachio orchards to drought-prone and high-temperature environments were widely discussed. Particular attention was given to sustainable production systems that integrate soil health, water-use efficiency and biodiversity enhancement, as well as to the role of new technologies in improving orchard monitoring and decision-making. The sessions on nut quality and postharvest technology addressed advances in compositional quality, shelf-life extension, mechanical processing, and innovative almond and pistachio-derived products for diversified markets. Discussions also emphasized traceability, consumer preferences, and opportunities for expanding value chains

in both traditional and emerging producing regions.

A technical tour was organized to commercial orchards, the IRTA Experimental Research Station, and industry sites, where participants visited orchards, trials and processing facilities. The visit showcased modern almond orchard systems, including super high-density (SHD) plantings, as well as pistachio orchards where research on precision irrigation is being conducted in collaboration between Europistachios and IRTA. It also included almond production model trials at IRTA's Experimental Research Station, providing valuable opportunities for field discussions on production challenges and ongoing innovations. The technical tour concluded with a visit to the processing facility of "Torrons Vicens," which offered participants an enjoyable tasting experience and a selection of traditional nougat and chocolate souvenirs.

An additional highlight of the symposium was the cultural event, during which partic-



A



B

► María José Rubio Cabetas, Chair of ISHS Working Group Almond and Pistachio, presenting the ISHS Young Minds Awards to A) Carlota Bernal Basurco (best oral presentation), B) Enrique González (best poster presentation).



► David Doll from Rota Unica presenting the award for the best oral presentation on almonds to Pasquale Losciale.

ipants visited the historic La Seu Vella castle in Lleida. The visit was accompanied by a glass of cava and featured an impressive performance by the Castellars de Lleida, showcasing the traditional Catalan human tower formation, a remarkable expression of local cultural heritage and collective effort.

During the ISHS Business Meeting, the two conveners, together with the Chair of the ISHS Working Group Almond and Pistachio, María José Rubio Cabetas, presented the ISHS Young Minds Awards for best oral and poster presentations to young researchers for their outstanding scientific contributions in almond and pistachio research. The awards were granted to Carlota Bernal Basurco from the Universidad Politécnica de Madrid, Spain, for the best oral presentation entitled “Bearing status modulates stomatal regulation and biochemical photosynthetic capaci-

ty under water stress in pistachio” and to Enrique González from IRTA, Spain, for the best poster presentation entitled “Unveiling the impact of climate change on almond dormancy”.

On this occasion, additional recognition was also given to the best oral presentations specifically in almond and pistachio research. The awards were granted to Pasquale Losciale for the presentation entitled “A dynamic crop coefficient based on stomatal conductance thresholds for irrigation management in almond,” and to Sergio Castro-García for the presentation entitled “Pistachio pollen production and harvesting strategies for artificial pollination in intensive orchards.”

The two conveners, Xavier Miarnau and Joaquim Bellvert, also received ISHS medals from Giulia Marino, Chair of ISHS Division Temperate Tree Nuts.

The symposium concluded with discussions on future collaborations and the role of integrated research networks in advancing the almond and pistachio sectors globally. The next International Symposium on Almonds and Pistachios is expected to take place in May 2030 in the city of Adana, Turkey, convened by Salih Kafkas. ●

Xavier Miarnau and Joaquim Bellvert

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> X Southeastern and Eastern Europe Symposium on Vegetables and Potatoes

Division Vegetables, Roots and Tubers

#ishs_dveg

Division Greenhouse and Indoor Production Horticulture

#ishs_dgip

The X Southeastern and Eastern Europe Symposium on Vegetables and Potatoes was held from 17 to 21 May 2026 at the Mediterranean Agronomic Institute of Chania (MAICh), Crete, Greece. The symposium was organized by the Agricultural University of Athens under the aegis of the International Society for Horticultural Science (ISHS).

Although geographically focused on southeastern and eastern Europe, the symposium attracted researchers, students, industry representatives and policymakers from around the world, underscoring the growing global importance of resilient and sustainable vegetable production systems. Altogether, 85 participants from 27 countries participated in the symposium. The scientific program included 4 keynote lectures, 5 invited speakers, 52 oral presentations and 38 poster presentations. During the symposium, a technical session in Greek and English with industry contributions, and a regional FAO workshop were organized as satellite events, covering a broad spectrum of topics related to vegetable and potato production under rapidly changing environmental conditions.

The opening ceremony featured welcoming remarks by the convener, Professor Dimitrios Savvas, followed by a welcome speech by the Director of MAICh, Dr. George Baourakis. Professor Yüksel Tüzel presented the activities and mission of ISHS and awarded ISHS

medals and certificates to the conveners. The symposium was officially declared open by the Deputy Governor of Crete.

Climate change adaptation and resilience emerged as central themes throughout the symposium. Keynote presentations and sci-



> Introductory speech by the convener Professor Dimitrios Savvas (center) during the Opening Ceremony. The convener Professor Nazim Gruda is sitting on the left, and the Symposium Secretary Dr. Panagiotis Kaloizoumis is sitting on the right.



► Participants of the symposium.

entific discussions emphasized the growing pressures facing vegetable production systems, including heat stress, water scarcity, irregular precipitation patterns, salinity, flooding and declining resource-use efficiency. Presentations explored innovative pathways for improving resilience through precision agriculture, protected cultivation systems, soilless and hydroponic production, integrated pest management, and breeding for stress tolerance.

A substantial part of the symposium focused on biostimulants and non-chemical approaches to improving plant resilience under biotic and abiotic stress. This was the topic with the most oral presentations and numerous studies demonstrated the positive effects of microbial inoculants, seaweed extracts, microalgae-based products, humic substances, selenium biofortification, and strigolactone-like compounds on crop performance, nutrient use efficiency, stress tolerance and postharvest quality. These contributions reflected the increasing shift

toward environmentally friendly production systems aimed at reducing dependence on conventional agrochemicals. Protected cultivation and soilless production systems represented another major scientific focus. Several presentations addressed advanced fertigation management, precision hydroponics, greenhouse climate control, nutrient recycling, and decision-support systems based on novel sensors and digital technologies.

The Technical Session took place on 18 May in the afternoon. In this satellite event, invited scientists and sponsors discussed new technologies for the new challenges faced by the vegetable production sector due to climate change.

The FAO Regional Analytical Workshop on Crop Diversification, Climate Resilience and Biodiversity-Rich Varieties was held from 19 to 20 May as a side event of the symposium. Coordinated by FAO and led by Dr. Urbashi Hazarika from FAO and Professor Dr. Nazim Gruda, the event brought together scientists, policymakers and experts from southeast-

ern Europe, the South Caucasus and Central Asia. They discussed diversification gaps, climate-related productivity risks, genetic resource erosion, seed systems, institutional constraints and policy opportunities for sustainable agriculture. Country contributions highlighted the importance of local cultivars and biodiversity in enhancing climate resilience and food security. The discussions underscored the need for regional strategies to preserve agrobiodiversity and support sustainable horticulture amid climate challenges.

Compared with earlier editions of this symposium series, the 2026 symposium demonstrated a clear evolution toward integrated and multidisciplinary sustainability approaches. While previous symposia traditionally focused primarily on cultivation practices and varietal development, the Chania symposium reflected the growing convergence between horticultural science, environmental sustainability, renewable energy, digital agriculture, biodiversity conservation and policy frameworks. The atmosphere of collegiality and friendship among participants was particularly evident during the symposium activities in Crete.

The final day included a technical and cultural field trip to greenhouse production areas in Kountoura and Falasarna. Participants visited commercial greenhouse operations featuring soil-grown cucumber and pepper crops and soilless cultivation systems, providing practical insights into modern Mediterranean protected horticulture. The field visits demonstrated how technological innovation and local expertise are contributing to the rapid evolution of greenhouse production systems in Crete.

During the symposium, two ISHS Young Minds Awards for junior scientists were given, one award for the best oral presentation and one award for the best poster



► Winners of the ISHS Young Minds Awards: A) Asmita Nagila (best oral presentation), B) Ovidia Loredana Agapie (best poster presentation).



► Field trip on commercial pepper greenhouse crop.

presentation. Two special committees were set up during the symposium by senior professors originating from Belgium, USA, Spain and Portugal to evaluate the presentations. The Young Minds Award winners were:

- Ms. Asmita Nagila, Texas AM University, USA, for the best oral presentation entitled “Vigorous rootstocks and microbial inoculation enhance organic pepper performance”;
- Dr. Ovidia Loredana Agapie, Vegetable Research and Development Station Buzău, Romania, for the best poster presentation entitled “Effects of cold plasma treatment on germination dynamics and early seedling development in common bean (*Phaseolus vulgaris* L.)”.

The X Southeastern and Eastern Europe Symposium on Vegetables and Potatoes confirmed the dynamic progress of horticultural research in the region and highlighted the essential role of innovation, biodiversity conservation, climate resilience, and international cooperation in shaping the future of vegetable and potato production. During the ISHS Business meeting, Dr. Giedre Samuoliene was elected as Chair of ISHS Working Group Southeastern and Eastern

Europe Vegetables and Potatoes. The XI Southeastern and Eastern Europe Symposium on Vegetables and Potatoes will be held on 9-14 September 2029 in Kaunas, Lithuania (<https://ishs.org/symposium/864/>), while the XII Southeastern and Eastern Europe Symposium on Vegetables and Potatoes is scheduled for 2032 in Turkey. ●

Panagiotis Kalozoumis, Dimitrios Savvas and Nazim Gruda

► Contact

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Homeostatic Systemins™

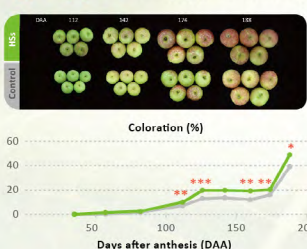
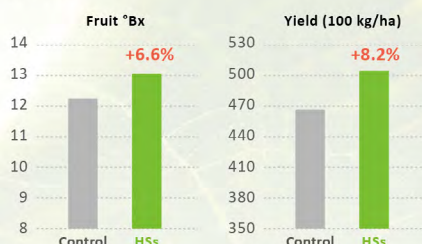
Powering Every Bite. Unlock crop potential for sweeter, better quality harvests.

Peptide-based biostimulant designed to maintain plant homeostasis under environmental fluctuations



Field-Proven Efficacy: Homeostatic Systemins™ (HSs) Boosts Yield and Sweetness

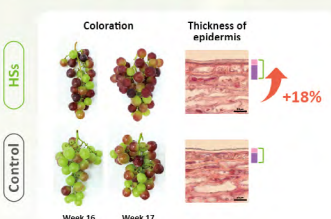
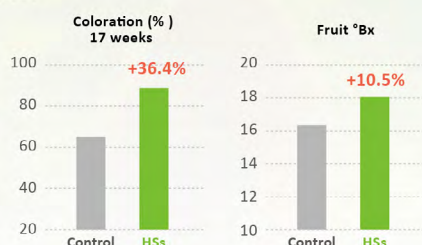
Apple Foggy or Rainy Conditions



↑ **+6.6 %** Fruit °Bx
↑ **+8.2 %** Yield Increase

Boosts photosynthesis and supports steady fruit development and sugar accumulation under low sun light.

Table Grape Rainy Weather



↑ **+36.4 %** Coloration
↑ **+10.5 %** Fruit °Bx

Improves fruit coloration and reduce fruit cracking in rainy weather, ensuring premium grape quality for better marketability

Note: The data of Homeostatic Systemins™ performance on crops are derived from field trial results generated by CH Biotech's R&D team using scientifically established methodologies. The corresponding summarized descriptions of the trial design are available at <https://chbiotech.ch/HSS-Summarized-Descriptions-of-Field-Trial-Design>

CH Biotech
R&D Co., Ltd.

For more information, please contact us: info@chbio.com.tw
<https://www.chbio.com>



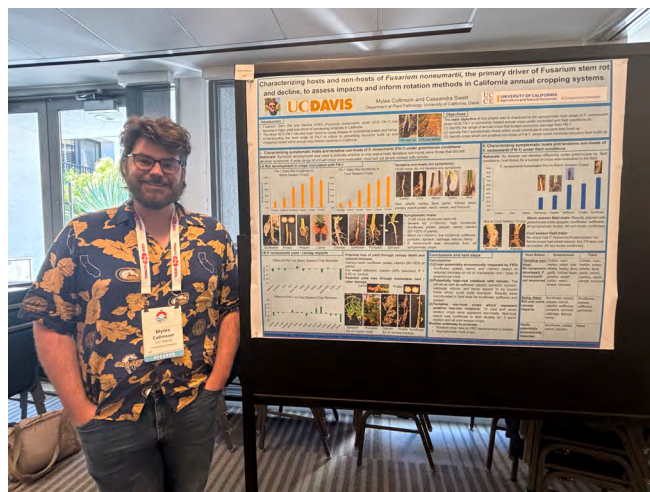
> XVIII International Symposium on Processing Tomato

Division Vegetables, Roots and Tubers

#ishs_dveg



> Conveners Luca Sandei (left), Brenna Aegerter (second from right) and Zach Bagley (right) presenting the ISHS Young Minds Award for the best poster presentation to Nazmin Akter (second from left).



> Myles Collinson, recipient of the Cosme Argerich Award.

The XVIII International Symposium on Processing Tomato was held in conjunction with the XVI World Processing Tomato Congress in Monterey (California), USA, from 7 to 10 June 2026, under the aegis of the International Society for Horticultural Science (ISHS) and the World Processing Tomato Council (WPTC).

The ISHS International Symposium on Processing Tomato is unique in that it brings together academic researchers and students, growers, processors, breeders, suppliers and other industry professionals. This has been one of its greatest strengths since the first World Processing Tomato Congress in Avignon, France, in 1989, and the creation of WPTC in Pamplona, Spain, in 1998. By placing research and industry in the same room, the format creates space for practical exchange, the building of new relationships and shared problem-solving.

The event was organized by the WPTC with the California Tomato Growers Association (CTGA) and the California League of Food Producers (CLFP). Three scientists worked together as Conveners: Luca Sandei from the Experimental Station for the Food Preserving Industry (SSICA) in Italy and Chair of ISHS Working Group Production of Vegetables for Processing; Brenna Aegerter from UC Cooperative Extension (California); and Zach Bagley from the California Tomato Research Institute (CTRI). Sophie Colvine (WPTC, France) acted once again as Symposium Secretary.

The call for papers attracted 60 abstract submissions from 13 different countries, confirming the keen interest and enthusiasm the scientific community has for research in the field of processing tomatoes. The symposium program was arranged into six oral sessions, a poster session and a roundtable. Three of the oral sessions were opened by an invited keynote speaker: Montana Camara from University Complutense Madrid in Spain on nutrition and food labelling; David Francis from The Ohio State University on breeding; and Brad Hanson from UC Davis on broomrape.

Several additional sessions were held jointly with the congress, extending information to the broader congress audience. These included the opening session, with a lecture by Richard Sexton from UC Davis on the challenges of feeding the world in the 21st century, and an Industry-Research roundtable chaired by Zach Bagley and Matt Stewart from Australia. The roundtable brought together researchers, growers, processors and industry representatives to discuss how collaborative research and communication could better address the practical challenges facing the global processing tomato industry. Rather than simply listing regional problems, each participating country was asked to present its highest-ranked production and processing research issues before the group considered where international coordination could add value.

This same theme continued in a second joint session, with a keynote presentation by David Francis of The Ohio State University and a panel discussion moderated by Zach Bagley with C.J. Jiang of HeinzSeed, Taylor Anderson of Bayer CropScience and Shantel Martinez of HM.Clause. The discussion focused on how the industry could make bet-

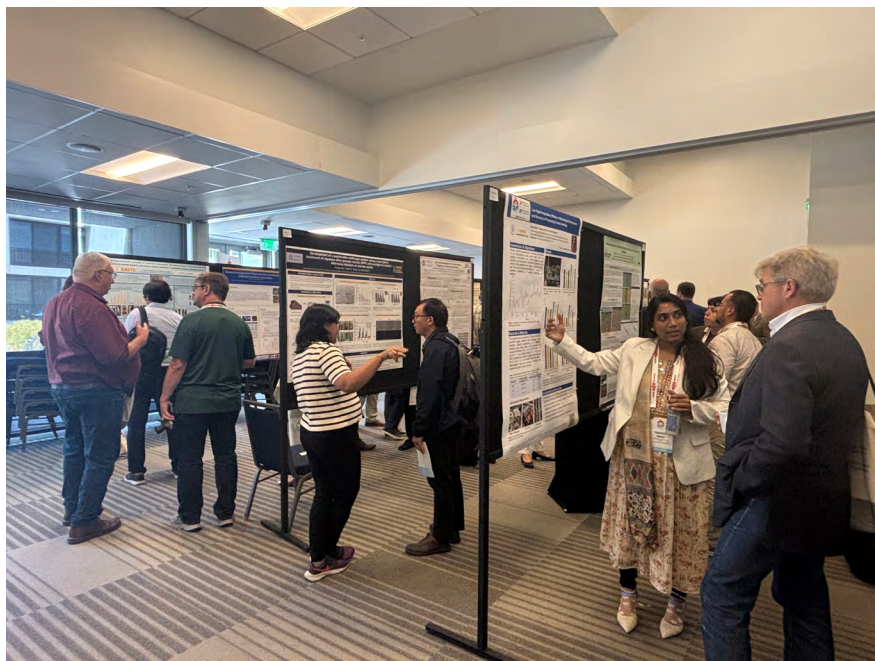


> Salome Ayekpuo Arewa, winner of the ISHS Young Minds Award for the best oral presentation.

ter use of existing tomato genetic resources and strengthen the bridge between public discovery, pre-breeding, field validation and private breeding programs, particularly for traits needed to address heat, water quality, pests, diseases, broomrape and market quality.

Sponsorship by The Morning Star Company and CTRI funded the participation of four young scientists who may not have joined otherwise through Adopt-a-Scientist grants. During the symposium, the Scientific Committee selected two ISHS Young Minds Awards for junior scientists. The award for the best oral presentation was given to Salome Ayekpuo Arewa, from Tomato Jos Farming and Processing Limited, who was allowed to present remotely from Nigeria her research paper entitled “Effect of transplanting window on *Tuta absoluta* infestation dynamics, yield, and soluble solids in commercial dry-season processing tomato production in northern Nigeria” after her visa application was declined. The award for the best poster was given to Nazmin Akter, a PhD student at UC Davis, USA, for her work entitled “Pre-transplant night chilling impairs shoot growth but promotes root elongation and physiological recovery in tomato seedlings”.

The seventh Bernard Bièche Memorial Award was presented to Jose Luis Llerena from CTAEX in Spain for his long involvement in tomato research and the excellence of his contributions during previous ISHS tomato symposia. Finally, the first Cosme Argerich Memorial Award, in memory of the Argentine researcher who was for many years the Chair of ISHS Working Group Production of Vegetables for Processing and was the Convener of several International Symposia on Process-



► Poster session.

ing Tomato, was awarded to Myles Collinson, a PhD candidate from UC Davis.

Ample opportunities were offered during four days to all attendees to interact both during the sessions and in more informal settings during recesses, meals, but also an outstanding welcome cocktail in Monterey aquarium and the one and a half day post-congress tours, which enabled participants to visit one of the world’s largest tomato processing facilities from The Morning Star Company, tomato fields and the Heinz-Seed headquarters.

The unique format continues to provide an excellent opportunity for information exchange between leading scientists and tomato industry representatives from

around the world. WPTC is already working towards the next event, which will take place in the Popes’ Palace in Avignon (France) in June 2028. 🟢

Sophie Colvine

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► Tomato field visit in the Delta area of the California Central Valley.

> XVI International Asparagus Symposium

Division Vegetables, Roots and Tubers

#ishs_dveg



> Participants of the symposium

Introduction

The XVI International Asparagus Symposium (IAS 2026) was held from 22 to 24 June 2026 at Wonkwang University in Iksan, Jeonbuk State, Republic of Korea, under the auspices of the International Society for Horticultural Science (ISHS). With the theme “Exploring the Diversity of the Asparagus Industry,” the symposium brought together researchers, growers, breeders, industry representatives, and seed-company professionals to discuss recent developments in asparagus research and production.

The symposium covered the wide diversity of topics impacting the global asparagus industry, from genetic resources and cultivar development to cultivation systems, crop physiology, disease management, postharvest technology, functional compounds, and marketing. It also provided an opportunity to compare production conditions and research priorities among asparagus-producing regions. Throughout the symposium, participants shared scientific findings, practical experiences, and ideas for future collaboration.

The symposium aimed not only to present recent research but also to strengthen connections between science and commercial production. Discussions frequently addressed challenges faced by growers, including environmental stress, labor short-

ages, disease control, efficient resource use, changing markets, and the need for cultivars adapted to local production conditions.

Organization and participation

Professor Yang-Gyu Ku of Wonkwang University served as Chair of the Organizing Committee, which included researchers from universities and research institutions in the



> Keynote presentation by
Prof. Dr. Akira Kanno

Republic of Korea. The Scientific Committee comprised specialists from Asia, Europe, North America, South America, and Oceania, contributing to the program's international scope and scientific quality.

The opening ceremony was attended by the President of Wonkwang University and the President of the Korean Society for Horticultural Science, both of whom welcomed the participants and emphasized the value of international scientific exchange. Their remarks also highlighted the importance of research, innovation, and technology transfer in supporting the continued development of the asparagus industry.

Approximately 70 participants from 15 countries attended the symposium. China had the largest overseas delegation, followed by participants from the Republic of Korea, Japan, Germany, the United States, the Netherlands, Peru, New Zealand, Vietnam, Italy, and several other countries. The participants represented a broad range of professional backgrounds, including universities, public research institutions, farming organizations, food-related industries, and seed companies. The atmosphere throughout the symposium was friendly and highly interactive. Scientific presentations were followed by active discussions, while coffee breaks, meals, poster sessions, and technical visits provided additional opportunities for participants to



► Prof. Dr. Andres V. Casas Diaz (left), former Chair of ISHS Working Group Asparagus, and Prof. Dr. Yang Gyu Ku (right), Convener, presenting the ISHS Young Minds Awards to A) Xujuan Zhang (best oral presentation) and B) Mona Futami (best poster presentation).

exchange ideas. Young researchers were able to speak directly with senior scientists and industry specialists, and many conversations extended beyond the formal sessions. This open atmosphere helped strengthen existing professional relationships and encouraged new international collaborations.

Scientific program

The scientific program included five keynote lectures, 12 contributed oral presentations, and 20 poster presentations. The presentations were organized into five main thematic areas:

- Genetics and Breeding;
- Cultivation and Production Systems;

- Physiology and Biochemistry;
- Pathology and Pest Management;
- Food Functionality, Postharvest, and Marketing.

The Genetics and Breeding session focused on developing improved asparagus cultivars using genetic resources and modern breeding approaches. Professor Akira Kanno (Chiba University, Japan) delivered the keynote lecture “Current status and future prospects of asparagus breeding using wild Japanese *Asparagus* species.” He reviewed recent progress in asparagus breeding, using wild Japanese *Asparagus* species, particularly *Asparagus kiusianus*, as valuable genetic resources to develop cultivars with improved disease

resistance and other desirable agronomic traits. The session also included presentations on seedling evaluation and breeding materials for interspecific hybrid asparagus, highlighting continued efforts to broaden the genetic base of cultivated asparagus.

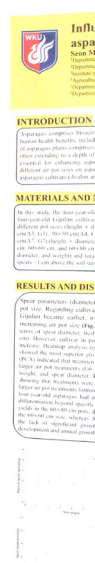
The Cultivation and Production Systems session addressed current challenges and innovations in asparagus production under diverse environmental conditions. Professor Andres Casas (La Molina National Agrarian University, Peru) reviewed the historical development of the Peruvian asparagus industry and discussed future priorities for maintaining sustainable production and improving postharvest quality.

Research presented in the Physiology and Biochemistry session emphasized the physiological responses of asparagus to cultivation practices and environmental conditions. Dr. Jan Graefe (Leibniz Institute of Vegetable and Ornamental Crops, Germany) delivered a keynote lecture on field-scale evapotranspiration and modeling approaches for asparagus production systems. His presentation demonstrated how long-term environmental measurements and physiological modeling can support water management and operational decision-making in commercial asparagus production.

The Pathology and Pest Management session highlighted integrated approaches for improving crop health under changing production environments. Dr. Matthew Falloon (Aspara Pacific, New Zealand) presented a keynote lecture on reverse harvesting and its relationship with pest and disease management in New Zealand asparagus production.



► Poster presentation and discussion.





► Technical tour in Gangwon Province, Korea: A) asparagus farm, B) Hoban Nursery.

His presentation discussed disease occurrence during the fern-growth period, including *Phytophthora* diseases, *Stemphylium* leaf spot, and purple spot, as well as practical management strategies to maintain long-term productivity.

The Food Functionality, Postharvest, and Marketing session highlighted the growing importance of asparagus beyond fresh-vegetable production. Dr. Chen Guangyu (Jiangxi Academy of Agricultural Sciences, China) delivered the keynote lecture “Asparagus big health industry in China,” introducing recent developments in China’s asparagus industry, including smart agriculture, mechanization, environmental conservation, and the utilization of asparagus bioactive compounds in functional foods, pharmaceuticals, and health-related products.

Overall, the scientific program demonstrated that asparagus research is becoming increasingly multidisciplinary. Traditional topics such as breeding, cultivation, and crop protection were complemented by studies on smart agriculture, physiological modeling, environmental sustainability, bioactive compounds, functional foods, postharvest technology, and international market development.

Highlights of the symposium

The diversity of research topics was a feature of the symposium, demonstrating the full evolution of the asparagus sector from basic research to applications in production and market development. Several reports focused on the development of high-yielding asparagus cultivars with pest and disease resistance and adaptability to changing climatic conditions. Furthermore, the promotion of innovative technology was also stressed to enhance production efficiency and crop management.

The symposium also saw a trend towards more studies on the nutritional content,

bioactive compounds, postharvest quality, and value chain development of asparagus products.

Technical tours and networking activities

The symposium also scheduled several activities alongside the scientific program to foster interaction and connections among scientists, specialists and businesspeople from many nations. Delegates visited various typical asparagus-producing areas in northern and southern South Korea during pre- and post-symposium technical visits. These trips gave participants an opportunity to understand the cultivation, field management, and production activities in commercial farms first-hand. The team also visited a model smart farm where modern technology was utilized to monitor environmental conditions, manage crops, and improve production.

In addition to professional events, the symposium allowed delegates to enjoy traditional Korean culture through art performances, traditional dances and music, a visit to a Hanok hamlet, and local specialties. These events fostered the host country’s culture and identity, provided an open forum for interaction, and strengthened ties between scientists and international delegations.

The technical tour and cultural exchange activities effectively complemented the symposium’s scientific agenda, combining research with practical production and furthering cooperation and intellectual exchange within the international community of asparagus researchers.

Conclusions

One of the highlights of the symposium closing ceremony was the ISHS Young Minds Awards, which recognize and encourage outstanding contributions by young scientists in asparagus research. The awards are based

on scientific quality, research innovation, and presentation quality, thereby motivating young researchers to continue developing their research careers and increasing their participation in international scientific activities.

The ISHS Young Minds Awards were given to Xujuan Zhang from Hangzhou Jiahui Agricultural Development Co., Ltd., China, for the best oral presentation entitled “High-quality, simplified, and efficient production technology for greenhouse-grown green asparagus in the Yangtze River Basin Region of China” and to Mona Futami from Meiji University, Japan, for the best poster presentation entitled “Effects of plant age on yield and quality in five green asparagus (*Asparagus officinalis* L.) cultivars”. This achievement not only recognizes the author’s research quality but also reflects the important role of the younger generation of scientists in promoting innovation and sustainable development of the asparagus industry in the future.

During the ISHS Business meeting, Dr. Akira Kanno from Chiba University, Japan, and Dr. Wenjing Chen from Walker Brothers Seeds and Plants, LLC, USA, were elected as the new Chair and Vice-Chair of the ISHS Working Group Asparagus. The XVII International Asparagus Symposium will be held in the USA in 2030. ●

Yang Gyu Ku

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➤ Powering the future of sustainable horticulture: science × industry

At Macfrut, a leading international trade fair for the fruit and vegetable sector in Rimini, Italy, the International Society for Horticultural Science (ISHS) organized an industry dialogue on April 21, 2026.

For a number of reasons, horticultural research in the public sector is under pressure. In the past 2-3 decades, several chairs of horticulture at academic and technical universities have disappeared, weakening the ability of these institutions to undertake basic and applied horticultural research. While big companies have to some extent compensated for this loss through their own in-house research, a better connection is needed between the research conducted in academia and at public research institutions, and industry.

To maintain and indeed strengthen the innovation potential and capacities of the sector, this workshop sought to explore how dialogue and cooperation between academia and industry could facilitate sustainable solutions that are urgently needed in view of the global challenges facing horticulture. Bruno Mezzetti from the Università Politecnica delle Marche, Italy, Chair of ISHS Division Vine and Berry Fruits, and Chair of Macfrut's scientific and technical committee, made a brief introductory presentation on what ISHS is and does, while Lukas Bertschinger, ISHS Board member, provided an overview of the benefits of a corporate ISHS membership. Valtiero Mazzotti from Unitec S.p.A., Italy, represented the industry at the workshop and provided an insight into what industry expects from research, and how collaboration between academia and industry could productively work. Finally, Luca Corelli Grappadelli from the Università di Bologna, Italy, Chair of ISHS Division Temperate Tree Fruits, provided an insight in three successful cases of a productive partnership and new organizational approaches to facilitate the cooperation needed.

In an open forum, participants then reflected on the presentations and discussed possible success factors. The conflict between the non-profit status of academia and public research institutions, and the profit-orientation of industry were discussed at length. The following conclusions were drawn from the workshop:

- Innovation is key for the success of the industry.



➤ From left to right: Stefano Predieri (National Research Council of Italy), Luca Corelli Grappadelli (Università di Bologna, Italy), Valtiero Mazzotti (UNITEC S.p.A., Italy), Bruno Mezzetti (Università Politecnica delle Marche, Italy), Lukas Bertschinger (ISHS Board member). ©Papasseit

- The industry has a long history of adopting innovation. The adoption of innovation is key to improving industry competitiveness.
- Academic training and research activities must be more oriented to industry needs and research results better communicated to the industry.
- Dedicated training is a key factor for increasing the capacity of industry to innovate.
- Academy and scientific societies need to better support all aspects of the industry from small to medium enterprises, start-ups and multi-national corporations.
- Fundamental research is a risk for industry as an outcome is not guaranteed, but public co-funding and collective approaches will increase companies' willingness to invest.
- Industry needs to derive benefits. Well defined applied research can reduce the risks for industry.
- Academic and scientific societies can support industry in developing appropriate rules for the adoption of new products and gain political support for the development of public-private partnerships and collaborative research projects.
- New approaches are needed to avoid the brain-drain. There is a mutual need to encourage and sign on young talent, and to strengthen the connection between academia and industry.
- ISHS can act as a broker between companies and researchers. It could establish a special Division to address industry needs.
- ISHS can help corporate members through its individual members' network providing fast, simple matchmaking for companies seeking to undertake innovative trials in new geographic regions.
- The creation of a foundation supported by a consortium of corporates could establish a successful framework to involve representatives from academia in developing research projects and developing modern curricula for attracting youth.
- The interests of science and industry can be jointly addressed, where industry provides the funding while the infrastructure is provided by academia and publicly funded research institutions.

The unanimous opinion of the participants was that this workshop could be the catalyst

for a growing discussion and many more events to facilitate dialogue and cooperation between academia and industry.

The workshop clearly highlighted the role of ISHS in connecting scientists, fostering high-quality impact-driven research and disseminating knowledge worldwide. ●

Lukas Bertschinger,
Bruno Mezzetti, Valtiero Mazzotti
and Luca Corelli Grappadelli

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> UrbanFarm2026 – International Student Challenge

Division Landscape and Urban Horticulture

#ishs_durb

Urban food systems are more than just supply chains. Urban agriculture has the potential to shape communities through social interaction, cooperation and inclusion. With this spirit, the International Student Challenge UrbanFarm2026 brought together students from across the world to explore how sustainable urban agriculture could become a powerful driver of social inclusion, community resilience and food justice. Now in its 8th consecutive year, the competition, organized by the University of Bologna (Italy), the KTH Royal Institute of Technology (Sweden), and the Universitat Autònoma de Barcelona (Spain), once again united students from

diverse disciplines and backgrounds in a vibrant exchange of ideas.

This year's challenge focused on the Metropolitan Area of Barcelona, Spain, where teams were tasked with reimagining and proposing innovative solutions to redesign the seventh phase of Sant Cosme, a social housing neighborhood in the municipality of El Prat de Llobregat. Sant Cosme is a resilient community with a strong identity, yet it continues to face deep-rooted challenges: economic vulnerability, limited access to fresh and healthy food, and concerns around personal safety. The students' mission was to transform an underutilized space into a vibrant, multidisciplinary

environment where sustainable agricultural practices could simultaneously address food insecurity, foster social cohesion and create local economic opportunities.

UrbanFarm2026 officially kicked off on 24 February 2026, culminating in an exciting grand finale on 21 May 2026 at the ICTA-UAB building on the UAB Campus in Barcelona, hosted by the Sostenipra research team. Nine teams took to the podium to present their concepts to an academic jury of experts, including Verónica Arcas Pilz, Xavier Gabarrell Durany, Pietro Tonini, Xavier Vancells, Óscar Redondo, Riccardo Prandi and Andrea D'Aprile.



> Team Urban Revival Studio, winners of UrbanFarm2026. From left to right: Nicolás Altimiras, Fatehveer Singh, Subashni Palanisamy, and Tárnok András.

Over three months, each of the nine teams developed their proposals focusing on agricultural innovation and social inclusion. Ultimately, the “Urban Revival Studio” team won the competition, bringing together a diverse group of talents from multiple institutions: Nicolás Altimiras (University of Bologna, Italy), Farida Amr (Cairo University, Egypt), Tárnok András (University of Bologna, Italy), Kaushiki Brahma (KTH Royal Institute of Technology, Sweden), Mitchell Mahachi (Technical University of Munich, Germany), Mishkat Omer (Cairo University, Egypt), Subashni Palanisamy (University of Bologna, Italy), and Fatehveer Singh (University of Bologna, Italy). Team Urban Revival Studio reimagined the seventh phase of Sant Cosme as a community-led agro-based rehabilitation space, combining low-tech food production systems with a vision of urban agriculture as a vehicle for social transformation. Beyond food production, the project proposed a multifunctional community hub with informal learning spaces, cultural activities and skill-building workshops, with the explicit goal of turning residents from passive beneficiaries into active stewards of their own neighborhood. To recognize their outstanding work, each member of the winning team received the prestigious ISHS Young Minds

Award, including an official certificate and a one-year subscription to ISHS. An honorable mention goes to all participating teams, whose creativity and commitment made the judging process especially challenging.

Beyond the competition itself, the week in Barcelona offered students a rich programme of immersive technical visits. A guided tour of urban hydroponic gardens illustrated how growing food can facilitate social inclusion. A full day in El Prat de Llobregat, visiting different organizations including Fundesplai, Espigoladors and La Botiga, revealed how local actors are actively reshaping food access and community wellbeing from the ground up. Students also had the opportunity to visit one of Barcelona’s largest open-air rooftop farms, located on top of a municipal market and managed by the cooperative Tarpuna. The week concluded with a visit to Salt, a town near Girona, which offered a further encounter with the living lab of the European project REDESIGN, coordinated by the University of Bologna, and managed by the association Milfulles, where food system transformation is being tested in real communities.

This edition of UrbanFarm2026 reaffirmed that the future of urban agriculture is deeply connected with the future of our com-

munities. By encouraging students to think beyond yields and technologies, and to consider equity, participation and social impact, the competition continues to grow as a catalyst for meaningful change.

The UrbanFarm2026 organizing committee would like to acknowledge the Sostenipra research team at the Universitat Autònoma de Barcelona for hosting the grand finale, as well as all the local organizations and partners who opened their doors during the technical visits, and above all the participating students, the true driving force behind this event. ●

Riccardo Prandi, Andrea D’Aprile and Verónica Arcas Pilz

➤ Contact

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➤ Snapshots of the visits in Barcelona: A) group picture during the visit at Espigoladors, B) visit at Tectum Garden.



➤ www.actahort.org
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> New ISHS members

ISHS is pleased to welcome the following new members:

New Individual Members

Australia: Dr. Joanne Ashnest, Dr. Aude Gourieroux, Mr. Grant Joyce, Ms. Sonali Koundal, Mr. Anshul Phaugat, Ms. Valerie Smith, Assoc. Prof. Nic Taylor, Dr. Andrew Walsh, Gary Yong Gee; **Belgium:** Ms. Annelies Claes, Mr. Jan Creylman, Mr. Erik De Boeck, Ms. Jana Dutordoir, Jan Engelen, Lisa Huybrechts, Evelien Rosiers, Jan Van Butsele; **Brazil:** Ms. Monica Alves, José Victor Mauricio de Jesus, Dr. Maria Raseira; **Canada:** Howard Ahn, Ms. Chanel Bell, Dominique Savard, Andres Torres; **Chile:** Mr. Winston Colvin, Pablo Nuñez; **China:** Dr. Shariq Mahmood Alam, Mr. Guo Jianchong, Lie Li, Prof. Cheng Liu, Ms. Shuang Liu, Lin Wang, Prof. Xiaowu Wang, Lei Zhang, Prof. Dr. Yangyong Zhang; **Chinese Taipei:** Jie Chen, Ms. Ming-chuan Chung, Prof. Dr. Yan-Fu Kuo, Ms. Yu Han Lin, Mr. Thuyen Thang Tran; **Colombia:** Prof. Dr. Fanor Cassiera, Dr. Juan Carlos Gallego, Dr. Margarita Perea Dallos; **Costa Rica:** Mr. Eric Mora; **Croatia:** Dr. Anamarija Peter; **Estonia:** Ms. Tiit Annuk; **France:** Ms. Valérie Berghaud, Mr. Gilles Costantino, Dr. Khadidiatou Diop, Mr. Vincent Dubot, Ms. Elisa Jacquotte, Chantal Le Coguic, Arthur Pesci, Ms. Sanako Roy; **Georgia:** Mr. Aleksandre Shamugia; **Germany:** Lukas Behr, Marcus Birke, Dr. Henrike Brust, Theo Horn, Constantin Klyk, Linnéa Lukas, André Reidl, Merope Zanker-Gerstmeier; **Hungary:** Dr. Szabolcs Monoki; **India:** Mr. Ramlal Ayyagari, Khushi Chawda, Dr. Harvinder Singh

Dhaliwal, Assist. Prof. Soumya M Hegde, Ms. Anusree K.A., Assoc. Prof. Gopa Mishra, Ms. Chitra Prakash, Prof. Dr. G.S. Sreedaya; **Israel:** Eyal Bdolach, Dr. Livnat Goldenberg, Mr. Shay Igon Hagbi, Ms. Leanne Salto, Elena Whiteley; **Italy:** Dr. Cecilia Brunetti, Mr. Giuseppe Cannizzaro, Luisa Dalla Costa, Dr. Elisabetta Elisabetta, Dr. Valentina Lazazzara, Mr. Simon Radocchia; **Japan:** Dr. Tokihiro Fukatsu, Mr. Yuki Hareyama, Prof. Dr. Akira Ikura, Ms. Nao Iwahara, Taiyo Katsuyama, Toshiro Mado, Ms. Mana Nakano, Prof. Dr. Katsuhiko Sumitomo, Quan Yi, Dr. Kenichi Yoshimura; **Korea (Republic of):** Eunho Cha, Mr. Weonil Hong, Ye hee Jeong, Mr. Du Rim Kim, Mr. Narae Kim, Hyungil Lee, Mr. Minhwan Lee, Ms. Hyewon Seo, Ms. Gayun Shim; **Nepal:** Assist. Prof. Prabin Bhandari, Krishna Chand, Mr. Dipak Lamichhane; **Netherlands:** Mr. Liam Bhambhani, Leonardo Hinojosa Sanchez, Dr. Elin Howard, Dr. Sijie Huang, Elahe Javadi Asayesh, Shensicong Liu, Mr. Micha Nelis, Dr. Dan Jeric Arcega Rustia, Ms. Wachira Suwannarut, Ms. Hendrika van der Heide; **Nigeria:** Ms. Ebimboere Eniyeckpemi; **Pakistan:** Mr. Faisal Nadeem; **Philippines:** Ms. Girlie Frando; **Romania:** Ms. Alexandra Maria Bardos Martis, Dr. Gheorghe Cotet, Mr. Viorel Lefter, Ms. Ailin Molosag; **Senegal:** Ms. Khady Waly Faye; **South Africa:** Ms. Carol Lehtjõ, Ms. Mary-Jane Mahlare; **Spain:** Marc Balanza Garcia, Ms. Mary Selva Cuiñas Díaz, Dr. Enrique

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> Calendar of ISHS events

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Year 2026

- October 29 - November 1, 2026, Antalya (Turkey): **IV International Symposium on Fruit Culture along Silk Road Countries.** Info: Prof. Dr. Sezai Ercisli, Ataturk University Agricultural Faculty, Department of Horticulture, 25240 Erzurum, Turkey. Phone: (90) 442-2312599, Fax: (90) 442 2360958, E-mail: sercisli@gmail.com Web: <http://www.silkroad2026.com>
- November 17-19, 2026, Bastia, Corsica (France): **V International Symposium on Citrus Biotechnology.** Info: Dr. Francois Luro, AGAP Corse Equipe SEAPAG, station INRAE, 20230

- San Giuliano, France. Phone: (33)495595946, E-mail: francois.luro@inrae.fr E-mail symposium: contact-iscb26@inrae.fr Web: <https://citrusbiotech2026.symposium.inrae.fr/>
- November 18-20, 2026, Kathmandu (Nepal): **V International Orchid Symposium.** Info: Prof. Dr. Bijaya Pant, Central Department of Botany, Tribhuvan University, Kathmandu Nepal, Research Director, Annapurna Research Center, Kathmandu, Nepal. Phone: (977)9801203357, E-mail: b.pant@cdbtu.edu.np E-mail symposium: orchidsymposiumnepal@gmail.com Web: <https://www.annapurnaresearch.org/internationalorchidsymposium>

- November 22-27, 2026, Montagu, Western Cape (South Africa): **XIII International Workshop on Sap Flow**. Info: Dr. Phumudzo Charle Tharaga, office 1.220 Agriculture Building, University of the Free State, 205 Nelson Mandela Drive, 9300 FS Bloemfontein, South Africa. Phone: (27)514012882, E-mail: tharagac@arc.agric.za or Assoc. Prof. Robert Skelton, 1 Jan Smuts Avenue, Braamfontein, 2000 Gauteng Johannesburg, South Africa. Phone: (27)711109778, E-mail: rob.skelton@wits.ac.za or Dr. Muthianzhele Ravuluma, ARC - Agricultural Research Council, 20 Lelie Street, Idasvallei, 7609 Western Cape, Stellenbosch, South Africa. E-mail: ravulumam@arc.agric.za Web: <https://sapflow.co.za/>
- November 24-27, 2026, Udon Thani (Thailand): **International Symposium on Utilization and Cultivation of Medicinal and Aromatic Plants & VII International Symposium on Plant Genetic Resources and Breeding Research on Medicinal and Aromatic Plants**. Info: Mr. Rapibhat Chandarasrivongs, Department of Agriculture, 50 Phaholyothin Rd., Chatuchak 10900, Thailand. Phone: (66)25790583, E-mail: interudonexpo2026@gmail.com E-mail symposium: info.map2026@gmail.com Web: <https://www.doa.go.th/MAP2026/>

Year 2027

- January 19-22, 2027, Udon Thani (Thailand): **IV International Symposium on Tropical and Subtropical Ornamentals**. Info: Mr. Rapibhat Chandarasrivongs, Department of Agriculture, 50 Phaholyothin Rd., Chatuchak 10900, Thailand. Phone: (66)25790583, E-mail: interudonexpo2026@gmail.com E-mail symposium: info.tso2027@gmail.com Web: <https://www.doa.go.th/TSO2027/>
- January 31 - February 4, 2027, Ghent (Belgium): **VertiFarm2027: IV International Workshop on Vertical Farming**. Info: Dr. Bruno Gobin, Schaessestraat 18, 9070 Destelbergen, Belgium. Phone: (32)93539480, Fax: (32)3539495, E-mail: bruno.gobin@viaverda.be or Annelies Christiaens, Viaverda vzw, Schaessestraat 18, 9070 Destelbergen, Belgium. E-mail: annelies.christiaens@viaverda.be E-mail symposium: info@vertifarm2027.com Web: <http://www.vertifarm2027.com>
- March 8-11, 2027, Cartagena (Spain): **VI International Conference on Fresh-Cut and Minimally Processed Produce**. Info: Prof. Francisco Artés-Hernández, Postharvest & Refrigeration Group, Universidad Politécnica de Cartagena, Paseo Alfonso XIII, 48, 30203 Cartagena, Murcia, Spain. E-mail: fr.artes-hdez@upct.es or Dr. Ginés Benito Martínez Hernández, Universidad Politécnica de Cartagena, Paseo Alfonso XIII, 48, 30203 Murcia Cartagena, Spain. Phone: (34)968325754, E-mail: ginesbenito.martinez@upct.es E-mail symposium: freshcut@upct.es Web: <https://freshcut2027.org/>
- March 30 - April 3, 2027, Palermo (Italy): **V International Symposium on Soiless Culture and Hydroponics**. Info: Dr. Leo Sabatino, Viale delle Scienze, 90100 Palermo, Italy. E-mail: leo.sabatino@unipa.it or Assist. Prof. Georgia Ntatsi, Agricultural University of Athens, Laboratory of Vegetable Crops, Iera Odos 75, 11855 Athens, Greece. Phone: (30)2015294532, E-mail: ntatsi@aua.gr or Dr. Beppe Benedetto Consentino, Viale delle Scienze, 90100 Palermo, Dep. Agricultural, Food and Forest Science, University of Palermo, Palermo, Italy. E-mail: beppebenedetto.consentino@unipa.it or Dr. Murat Kacira, Dept. of Biosystems Engineering, 1177 East 4th Street, Room 403, Shantz Building, 38, Tucson, AZ 85721-0038, United States of America. Phone: (1) 520-626-4254, Fax: (1) 520-626-1700, E-mail: mkacira@email.arizona.edu Web: <https://www.issch.it/2026/en/home>
- May 3-7, 2027, Murcia (Spain): **II International Symposium on Apricot and Plum**. Info: Dr. David Ruiz, Departamento de Mejora Vegetal, CEBAS (CSIC), Campus de Espinardo, P.O. Box 164, 30100 Murcia, Spain. Phone: (34)968396237, Fax: (34)968396213, E-mail:

- druiz@cebas.csic.es or Dr. Manuel Rubio, CEBAS-CSIC PO box 164, 30100 Espinardo Murcia, Spain. E-mail: mrubio@cebas.csic.es Web: <https://www.apricotplum2027.org/>
- May 30 - June 3, 2027, Lleida (Spain): **XV International Pear Symposium**. Info: Dr. Luis Asin, IRTA-fruitcentre, Parc Científic i Tecnològic Agroalimentari, Parc de Gardeny - Edifici Fruitcentre, 25003 Lleida, Spain. Phone: (34)973032850, E-mail: luis.asin@irta.cat Web: <https://www.pearsymposium2027.com>
- June 6-10, 2027, Wageningen (Netherlands): **GreenSys2027 - International Symposium on Smart and Sustainable Greenhouse Systems**. Info: Dr. Silke Hemming, Wageningen University & Research, Business Unit Greenhouse Horticulture, Droevendaalsesteeg 1, 6708 PB Wageningen, Netherlands. Phone: (31)317 4 86921, E-mail: silke.hemming@wur.nl or Prof. Dr. Leo F. M. Marcelis, Wageningen University, Horticulture & Product Physiology, Droevendaalsesteeg 1, 6708 PB Wageningen, Netherlands. Phone: (31)317485675, E-mail: leo.marcelis@wur.nl or Dr. Ep Heuvelink, Greenhouse Crop Physiology and Modelling, Wageningen University, Droevendaalsesteeg 1, 6708 PB Wageningen, Netherlands. Phone: (31)317483679, Fax: (31)317484709, E-mail: ep.heuvelink@wur.nl E-mail symposium: info.greensys2027@wur.nl Web: <https://www.greensys2027.com>
- June 6-9, 2027, Coimbra (Portugal): **XXVIII International EUCARPIA Symposium Section Ornamentals - From Biology to Bioeconomy**. Info: Prof. Dr. Jorge Canhoto, Department of Life Sciences, University of Coimbra, Calçada Martim de Freitas, 3000-456 Coimbra, Portugal. Phone: (351)917859860, E-mail: jorgecan@ci.uc.pt or Dr. João Martins, Department of Life Sciences, University of Coimbra, Calçada Martim de Freitas, 3000-456 Coimbra, Portugal. Phone: (351)239240700, E-mail: joao.martins@uc.pt Web: <https://www.uc.pt/laboratorio-de-biotecnologia-vegetal/eucarpia2027-1/>
- June 14-18, 2027, Alnarp (Sweden): **XVII EUCARPIA Symposium on Fruit Breeding and Genetics**. Info: Assoc. Prof. Larisa Gustavsson, Swedish University of Agricultural Sciences, Department of Plant Breeding, Alnarp, Box 190, 234 22 Lomma, Sweden, Sweden. Phone: (46)402858114, E-mail: larisa.gustavsson@slu.se or Prof. Dr. Henryk Flachowsky, Pillnitzer Platz 3a, 01326 Dresden, Germany. E-mail: henryk.flachowsky@julius-kuehn.de E-mail symposium: EUCARPIA2027@akademikonferens.se Web: <https://www.eucarpia-fruit-breeding2027.se/>
- June 16-18, 2027, Torino (Italy): **VIII International Chestnut Symposium**. Info: Prof. Dr. Gabriele Loris Beccaro, Università degli Studi di Torino, Dept. Agric., Forestry & Food Sci., Largo Paolo Braccini 2, 10095 Grugliasco, Torino, Italy. Phone: (39)0116708802, Fax: (39)116708658, E-mail: gabriele.beccaro@unito.it or Prof. Roberto Botta, DISAFA - University of Torino, Largo Paolo Braccini 2, 10095 Grugliasco (TO), Italy. Phone: (39)0116708800, Fax: (39)0116708658, E-mail: roberto.botta@unito.it E-mail symposium: info@ics2027.com Web: <https://www.ics2027.com/>
- June 22-26, 2027, Lavras (Brazil): **III International Symposium on Root, Tuber and Bulb Crops**. Info: Prof. Valter Carvalho de Andrade Júnior, Universidade Federal de Lavras (UFLA), Campus Universitário, Lavras-MG, Brazil. Phone: (55) 35999102646, E-mail: valter.andrade@ufla.br E-mail symposium: isrtb2027@gmail.com Web: <https://www.isrtb2027.com/>
- June 28 - July 2, 2027, Istanbul (Turkey): **X International Symposium on Walnut and Pecan**. Info: Prof. Dr. Mehmet Sutyemez, Univ. of Kahramanmaraş Sutcu Imam, Faculty of Agriculture, Dept. of Horticulture, 46100 Kahramanmaraş, Turkey. E-mail: sutyemezmet@gmail.com or Mr. Hasimcan Yazicioglu, Dumlupinar Mah Ozen Sok No48 Yenitepe, Kadikoy Sitesi Etap2 ABlok D17, 34720 Istanbul Kadikoy, Turkey. Phone: (90)5333238505, E-mail: hasimcan@avrupatarim.com.tr

or Mr. Okan Gundemir, Incilipinar str No5, Denizli, Turkey.
E-mail: okan_gundemir@yahoo.com E-mail symposium:
info@walnutpecan.org Web: <https://www.walnutpecan.org/>

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■ July 5-9, 2027, Ft. Collins, CO (United States of America):

XI International Peach Symposium. Info: Assoc. Prof. Ioannis Minas, Dept of Horticulture & Landscape Architect., 301 University Ave., Fort Collins, Campus Delivery 1173, CO 80523-1173, United States of America. Phone: (1)9704917216, E-mail: ioannis.minas@colostate.edu Web: <https://agsci.colostate.edu/hortla/peach>

■ July 11-16, 2027, Pergine Valsugana (Italy): **XIV International Rubus and Ribes Symposium.** Info: Paolo Zucchi, Sant'Orsola SCA, Via dell'Aeroporto 14, 38057, Cirè di Pergine Valsugana (TN), Italy. E-mail: paolo.zucchi@santorsola.com or Dr. Brian Farneti, Fondazione Edmund Mach, Via Mach 1, 38010, San Michele all'Adige (TN), Italy. Phone: (39) 3475155297, E-mail: brian.farneti@fmach.it E-mail symposium: ruri@santorsola.com Web: <https://ruri.santorsola.com/>

■ July 19-22, 2027, Chiang Mai (Thailand): **VIII International Symposium on Lychee, Longan and Other Sapindaceae Fruits.**

Info: Assoc. Prof. Theeranuch Jaroenkit, Dept. Of Horticulture, Faculty of Agric. Production, Maejo University, San Sai, Chiang Mai 50290, Thailand. Phone: (66)53873605, E-mail: theeranu@gmail.com or Assoc. Prof. Chiti Sritontip, Agricultural Technology Research Institute, 202 Moo 17, Tambon Pichai, Amphur Muang, Lampang, 52000, Thailand. Phone: (66) 54-342553, Fax: (66) 54-342550, E-mail: chiti@rmutl.ac.th E-mail symposium: sapinda2027@gmaejo.mju.ac.th Web: <http://www.sapinda2027.com>

NEW

■ August 31 - September 3, 2027, Padua (Italy): **XIII International Symposium on Postharvest Quality of Ornamental Plants.** Info: Dr. Claudio Bonghi, University of Padova, Viale dell'Università, 16, Agripolis-Legnaro, 35020 Padova, Italy. Phone: (39)49-8272844, Fax: (39)49-8272850, E-mail: claudio.bonghi@unipd.it or Prof. Dr. Antonio Ferrante, Sant'Anna School of Advanced Studies, Institute of Crop Science, Via Piazza Martiri della Libertà 33, Pisa, Italy. Phone: (39) 050881841, Fax: (39) 0250316575, E-mail: antonio.ferrante@santannapisa.it

NEW

■ August 31 - September 3, 2027, Padua (Italy): **VIII International Conference Postharvest Unlimited.** Info: Dr. Claudio Bonghi, University of Padova, Viale dell'Università, 16, Agripolis-Legnaro, 35020 Padova, Italy. Phone: (39)49-8272844, Fax: (39)49-8272850, E-mail: claudio.bonghi@unipd.it or Prof. Dr. Antonio Ferrante, Sant'Anna School of Advanced Studies, Institute of Crop Science, Via Piazza Martiri della Libertà 33, Pisa, Italy. Phone: (39) 050881841, Fax: (39) 0250316575, E-mail: antonio.ferrante@santannapisa.it

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■ August 31 - September 3, 2027, Banja Luka (Bosnia and Herzegovina): **VI Balkan Symposium on Fruit Production Systems.** Info: Prof. Dr. Miljan Cvetkovic, Vojislava Djede Kecmanovica 1A, 78000 Banja Luka, Bosnia and Herzegovina. Phone: (387) 51 330 938, E-mail: miljan.cvetkovic@agro.unibl.org or Prof. Dr. Boris Pasalic, Kosovke djevojke 2, 78000 Banjaluka, Bosnia and Herzegovina. E-mail: boris.pasalic@agro.unibl.org E-mail symposium: balkanfps2027@agro.unibl.org Web: <https://www.balkanfps2027.com>

■ September 5-10, 2027, Matera (Italy): **XII International Symposium on Kiwifruit.** Info: Prof. Dr. Bartolomeo Dichio, Università degli Studi della Basilicata, Department of Agricultural, Forestry, Food and Environmental Sciences (DAFE), Via Lanera 20, 75100 Matera, Italy. Phone: (39)08351971418, E-mail: bartolomeo.dichio@unibas.it or Prof. Dr. Cristos Xiloyannis, Università degli Studi della Basilicata, Via Lanera 20, 75100 Matera, Italy. Phone: (39)0835314347, E-mail: cristosxiloyannis15@gmail.com or Dr. Alba Mininni, Università

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degli Studi della Basilicata, Department of Agricultural, Forestry, Food and Environmental Sciences (DAFE), Via Lanera 20, 75100 Matera, Italy. E-mail: alba.mininni@unibas.it E-mail symposium: symposium@ishskiwife2027.it Web: <https://ishskiwife2027.it/>

■ September 5-9, 2027, Bucharest (Romania): **VIII International Symposium on Fig.** Info: Prof. Dr. Florin Stanica, University of Agronomic Sciences, Faculty of Horticulture, B-dul Marasti, 59, Sector 1, 011464, Bucuresti, Romania. Phone: (40)722641795, Fax: (40)213182888, E-mail: flstanica@yahoo.co.uk E-mail symposium: figsymposium2027@usamv.ro Web: <https://figsymposium2027.usamv.ro/>

■ September 9-12, 2027, Caserta (Italy): **III International Symposium on Botanical Gardens and Landscapes.** Info: Assoc. Prof. Alberto Minelli, Distal Unibo, Via le Fanin 46, 40127 Bologna, Italy. E-mail: alberto.minelli@unibo.it

■ September 13-17, 2027, Beijing (China): **XI International Symposium on Soil and Substrate Disinfestation.** Info: Qiuxia Wang, Institute of Plant Protection, Chinese Academy of Agricultural Sciences, 2 West Yuanmingyuan Road, Haidian District, Beijing, China. E-mail: wqxcasy@163.com E-mail symposium: sd2027@vip.163.com Web: <https://www.sd2027.cn/>

■ September 15-17, 2027, Bucharest (Romania): **I International Symposium on Legume Crops.** Info: Creola Brezeanu, Vegetable Research and Development Station, Calea Barladului Street no 220, 600388 Bacau, Romania. Phone: (40)744642567, E-mail: creola.brezeanu@yahoo.com or Elena Bitocchi, Università Politecnica delle Marche, Dip. Scienze Agrarie, Alimentari e Ambientali, Via Brece Bianche, 10, 60131 Ancona, Italy. E-mail: e.bitocchi@univpm.it Web: <https://legumes-symposium.scdlbacau.ro/>

■ September 20-23, 2027, Zaragoza (Spain): **II International Symposium on Nursery Production of Certified Fruit Trees.** Info: Maria Jose Rubio Cabetas, Plant Science, Avda Montañana 930, 50059 Zaragoza, Spain. Phone: (34)976 716300, Fax: (34)976 716335, E-mail: mjrubioc@cita-aragon.es or Ms. Maria Teresa Espiau, CITA, Avda. Montañana, 930, 50059 Zaragoza, Spain. Phone: (34)976716218, Fax: (34)976716335, E-mail: mespiau@cita-aragon.es or Bibiana Macarulla Quintilla, CITA, Avda. Montañana, 930, 50059 Zaragoza, Spain. E-mail: bmacarulla@cita-aragon.es E-mail symposium: certifruit2027@cita-aragon.es Web: <https://www.certifruit2027.com>

■ September 21-24, 2027, Catania (Italy): **VI International Symposium on Ecologically Sound Nutrition and Fertilization Strategies for Vegetable Production (VegNutri2027).** Info: Prof. Dr. Donato Castronuovo, University of Salerno, Department of Pharmacy - DIFARMA, Via Giovanni Paolo II, n. 132, 84084 Fisciano (SA), Italy. Phone: (39)089969155, E-mail: dcastronuovo@unisa.it or Prof. Dr. Antonio Ferrante, Sant'Anna School of Advanced Studies, Institute of Crop Science, Via Piazza Martiri della Libertà 33, Pisa, Italy. Phone: (39) 050881841, Fax: (39) 0250316575, E-mail: antonio.ferrante@santannapisa.it or Dr. Donata Arena, University of Catania, Di3A, Via Santa Sofia 100, Catania, Italy. E-mail: donata.arena@unict.it or Prof. Dr. Ferdinando Branca, Di3A, Università di Catania, Via Valdisavoia 5, 95123 Catania, Italy. Phone: (39)095234307, Fax: (39)095234329, E-mail: fbranca@unict.it E-mail symposium: info@vegnutri2027.it Web: <https://www.vegnutri2027.it/>

■ September 27-30, 2027, Stellenbosch (South Africa): **VIII International Symposium on Applications of Modelling as an Innovative Technology in the Horticultural Supply Chain - Model-IT 2027.** Info: Dr. Oluwafemi James Caleb, Africa Institute for Postharvest Technology, Faculty of AgriSciences, Stellenbosch University, Stellenbosch 7602, South Africa. E-mail: caleb.oluwafemi@gmail.com or Dr. Alemayehu Tsige, Stellenbosch University, Merriman Ave, Room 0013, Al Perold

Building, 7602 Stellenbosch Western Cape, South Africa. E-mail: tsige@sun.ac.za or Dr. Zinash A Belay, Agricultural Research Council, infruitec-nietvoorbij, Helshoogte Rd, Stellenbosch Central, Stellenbosch, 7599, South Africa. E-mail: zinasha8@gmail.com E-mail symposium: info@model-it2027.org Web: <http://www.model-it2027.org>

NEW

■ September 27-30, 2027, Athens (Greece): **III International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation**. Info: Dr. Dimitrios Savvas, Agricultural University of Athens, Laboratory of Vegetable Production, Iera Odos 75, 11855 Athens, Greece. Phone: (30)2105294510, Fax: (30)2105294504, E-mail: dsavvas@aau.gr or Dr. Panagiotis Kalozoumis, Pontou 53, 16452 Attica Argypoli, Greece. Phone: (30)2105294536, E-mail: kalozoumis@aau.gr E-mail symposium: growingmedia2027@artion.com Web: <https://growingmedia2027.com/>

NEW

■ October 4-8, 2027, Palermo (Italy): **X International Olive Symposium**. Info: Prof. Dr. Tiziano Caruso, Department of Agricultural & Forest Science, University of Palermo, Viale delle Scienze, Edificio 4 ingresso H, 90128 Palermo, Italy. Phone: (39) 09123861207, E-mail: tiziano.caruso@unipa.it or Dr. Riccardo Lo Bianco, Università degli Studi di Palermo, Dipartimento SAAF, Viale delle Scienze, Ed 4, 90128 Palermo, Italy. Phone: (39) 0912386097, Fax: (39) 09123860813, E-mail: riccardo.lobianco@unipa.it or Prof. Francesco Marra, Department of Agricultural & Forest Science, Viale delle Scienze, Edificio 4 ingresso H, 90128 Palermo, Italy. Phone: (39)09123861236, Fax: (39)09123861211, E-mail: francescopaolo.marra@unipa.it Web: <https://www.ishsolive2027.it/>

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■ October 6-9, 2027, San Diego, CA (United States of America): **IV International Symposium on Moringa**. Info: Arthur Begliomini, chacara 11 Núcleo CAUB I, 71884-690 Brasília-DF, Brazil. Phone: (55)61999990031, E-mail: ahb.agro@outlook.com or Dr. Carrie Waterman, 1804 Commercial Way, Sacramento, CA 95818, United States of America. Phone: (1) 9165160320, E-mail: carriewaterman22@gmail.com Web: <https://www.ism2027.com/>

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■ October 17-21, 2027, Nanjing (China): **II International Symposium on Models for Plant Growth, Environments, Farm Management in Orchards and Protected Cultivation - HorchiModel2027**. Info: Prof. Dr. Juyou Wu, Weigang No.1, Nanjing, Jiangsu, 210095, China. E-mail: juyouwu@njau.edu.cn or Assoc. Prof. Ningyi Zhang, Nanjing Agricultural University, 210095, Nanjing, China. E-mail: ningyi.zhang@njau.edu.cn or Prof. Dr. Zhanwu Dai, Haidian, Xiangshan, Nanxincun 20, Beijing, China. E-mail: zhanwu.dai@ibcas.ac.cn E-mail symposium: horchimodel2027@njau.edu.cn Web: <https://horchimodel2027.njau.edu.cn/>

NEW

■ November 16-18, 2027, Dilla Town (Ethiopia): **VIII International Symposium on Cucurbits**. Info: Assist. Prof. Haile Ketema Assefa, Dilla University, 419 Dilla, Ethiopia. E-mail: ketemahaile2022@yahoo.com E-mail symposium: cucurbitsymposium2027@du.edu.et Web: <https://trms.du.edu.et/cucurbit/>

Year 2028

NEW

■ January 16-21, 2028, Florianópolis (Brazil): **XIV International Symposium on Integrating Canopy, Rootstock and Environmental Physiology in Orchard Systems**. Info: Prof. Leo Rufato, UDESC/LAGES, Avenida Luís de Camões 2090, Bairro Conta Dinheiro, CEP 88520-000, Lages, SC, Brazil. Phone: (55) 49991550121, E-mail: leoruffato@yahoo.com.br Web: <https://latec.udesc.br/eventos/events/orchardsystems2028>

NEW

■ January 24-28, 2028, Bloemfontein (South Africa): **XII International Congress on Cacti as Food, Fodder and Other Uses**. Info: Prof. Dr. Maryna de Wit, Sustainable Food Systems, PO Box 339, University of the Free State, Nelson Mandela Road 205, 9301 Free State Bloemfontein, South Africa. Phone: (27)51-4013261, Fax: (27)51-4019335, E-mail: dewitm@ufs.ac.za

■ February 22-25, 2028, Jalgaon, Maharashtra (India): **X International Symposium on Edible Alliums**. Info: Dr. Kisan Eknath Lawande, Sai Krupa, Surya Nagar, Tapovan Road, Ahmednagar, 414003, India. E-mail: kelawande2011@gmail.com or Mr. Ajit Jain, Jain Irrigation Systems Limited, Jain Hills, Shirsol Road, Jalgaon, Maharashtra, 425001, India. Phone: (91)0257-225011, E-mail: ajit@jains.com E-mail symposium: isea2028@gmail.com Web: <https://www.alliumsociety.org/international-symposium>

■ March 5-10, 2028, Catania (Italy): **XVI International Citrus Congress**. Info: Prof. Dr. Alessandra Gentile, University of Catania, Dip.Ortofloroarboricult.e Tec.Agroaliment., Via Valdisavioia, 5, 95123 Catania, Italy. Phone: (39)095234430, Fax: (39)095234406, E-mail: gentilea@unict.it

■ March 20-25, 2028, Nanjing, Jiangsu Province (China): **XIV International Vaccinium Symposium**. Info: Qilong Zeng, Qianhu Houcun No.1, Xuanwu District, Nanjing, China. E-mail: zengqilong@jib.ac.cn or Prof. Cheng Liu, Tiedong Street, Xiongyue Town, Yingkou, China. E-mail: stevecliu@hotmail.com

■ April 3-7, 2028, Murcia (Spain): **VI European Horticultural Congress - EHC2028**. Info: Dr. Francisco Pérez-Alfocea, Dept. of Plant Nutrition, CEBAS-CSIC, PO Box 164, 30100 Murcia, Spain. Phone: (34)968396342, Fax: (34)968396213, E-mail: alfocea@cebas.csic.es or Prof. Dr. Juan A. Fernandez, Dpto. Ingeniería Agronómica, Univ. Politécnica de Cartagena, Paseo Alfonso XIII, 48, 30203 Cartagena (Murcia), Spain. Phone: (34)968325446, Fax: (34)968325435, E-mail: juan.fernandez@upct.es

■ April 18-21, 2028, Rimini (Italy): **XII International Symposium on Human Health Effects of Fruits and Vegetables - FAVHEALTH2028**. Info: Dr. Luca Mazzoni, Università Politecnica delle Marche, Dip.Sci. Agrarie, Alimentari ed Ambientali, via Breccie Bianche, Ancona, 60100, Italy. E-mail: l.mazzoni@univpm.it or Prof. Dr. Bruno Mezzetti, Dip.Sci. Agrarie, Alimentari ed Ambientali, Università Politecnica delle Marche, Via Breccie Bianche, Ancona 60100, Italy. Phone: (39)0712204933, Fax: (39)0712204856, E-mail: b.mezzetti@univpm.it or Prof. Dr. Alessandra Bordonì, via del Colle 37, 40068 San Lazzaro (Bologna), Italy. E-mail: alessandra.bordonì@unibo.it

■ April 24-28, 2028, Jinan, Shandong (China): **VIII International Symposium on Tomato Diseases**. Info: Prof. Xiang-Dong Li, No. 23788, North Industrial Road, Jinan, Shandong, 250100, China. Phone: (86)13181776583, E-mail: xdongli@sdau.edu.cn

■ May 2-4, 2028, Kampala (Uganda): **VI All Africa Horticultural Congress - AAHC2028**. Info: Assoc. Prof. Elizabeth Balyejusa Kizito, Uganda Christian University, Plot 67-173, Mukono Hill, Bishop Tucker Road, Mukono, Uganda. Phone: (256)752141377, E-mail: ebkizito@ucu.ac.ug

■ June 4-8, 2028, Coimbra (Portugal): **I International Symposium on In Vitro Culture for Cloning, Conservation and Plant Breeding**. Info: Prof. Dr. Jorge Canhoto, Department of Life Sciences, University of Coimbra, Calçada Martim de Freitas, 3000-456 Coimbra, Portugal. Phone: (351)917859860, E-mail: jorgecan@ci.uc.pt

■ June 26-30, 2028, Fresno, CA (United States of America): **III International Symposium on Precision Management of Orchards and Vineyards**. Info: Assist. Prof. Luca Brillante, 2360 E Barstow Avenue, California State University Fresno, Fresno California 93740, United States of America. Phone: +15309023447, E-mail: lucabrillante@csufresno.edu

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Neda Moharreri, Bahram Abedy, Majid Rahemi, and Ahmad Balandary. (2026). Changes in the level of endogenous free polyamines and fruit development during bearing and non-bearing years in seedless barberry (*Berberis vulgaris* L.). <https://doi.org/10.1079/ejhs.2026.0015>

Shobnom Mustary, Mst. Adia Sultana, Prodipto Bishnu Angon, Maisha Rahman, Tahmina Akter, Mohammed Arif Sadik Polash, Shagata Islam Shorna, Most. Khadiza Khatun, Arpita Rani Roy, Jannatul Ferdows Sagar, et al. (2026). Natural food preservative from fish scales extends the shelf life of tomato (*Lycopersicon esculentum*). <https://doi.org/10.1079/ejhs.2026.0014>

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