

IX International Symposium on

Walnut & Pecan

Grenoble, France 12–16 June 2023



Programme*

www.francenut2023.com

**this programme will not be printed.*

Organised by



Supported by



Hosted by



Acknowledgements to sponsors

The Organising Committee thanks the following companies for their support:

Premium Sponsor

AGIR CHAQUE JOUR DANS VOTRE INTÉRÊT
ET CELUI DE LA SOCIÉTÉ



Gold Sponsors



Silver Sponsors



Bronze Sponsors



Institutional Partners



Table of Content

Welcome Messages	4–6	Exhibitors & Sponsors	30–33
Organisers & Committees	7–9	Social Programme	36
Programme	10–28	General Information	37–38
• Keynote lecturers	10–14		
• Daily programme	15–25		
• Posters	26–28		
• Technical Visits	35		

What's on? Programme at a glance

MONDAY 12 JUNE 2023

19:00 – 20:00 **WELCOME RECEPTION IN THE EXHIBITION AND WELCOME SPEECHES**

TUESDAY 13 JUNE 2023

08:45 – 09:00 **INTRODUCTION**

09:00 – 10:25 **SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY (Part 1)**

10:25 – 10:55 Coffee break

10:55 – 11:55 **SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY (Part 2)**

11:55 – 13:45 Lunch break

13:45 – 14:15 **SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY (Part 3)**

14:15 – 16:00 **SESSION II: PLANT PHYSIOLOGY (Part 1)**

16:00 – 16:30 Coffee break

16:30 – 17:15 **SESSION II: PLANT PHYSIOLOGY (Part 2)**

WEDNESDAY 14 JUNE 2023

08:45 – 10:20 **SESSION III: PRODUCTION, HARVEST, FRUIT QUALITY AND MARKETING**

10:20 – 10:50 Coffee break

10:50 – 12:20 **SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE (Part 1)**

12:20 – 12:50 **Industry Session: UNITEC**

12:50 – 14:05 Lunch break

14:05 – 15:50 **SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE (Part 2)**

15:50 – 16:20 Coffee break

16:20 – 17:20 **SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE (Part 3)**

17:20 – 18:20 **ISHS Business Meeting**

THURSDAY 15 JUNE 2023

08:45 – 10:35 **SESSION V: PESTS AND DISEASES (Part 1)**

10:35 – 11:05 Coffee break

11:05 – 12:35 **SESSION V: PESTS AND DISEASES (Part 2)**

12:35 – 13:05 **Industry Session: MONCHIERO**

13:05 – 14:00 Lunch time

14:00 – 15:30 **SESSION V: PESTS AND DISEASES (Part 3)**

15:30 – 16:00 Coffee Break

16:00 – 17:00 **CLOSING SESSION**

FRIDAY 16 JUNE 2023

08:30 – 17:45 **TECHNICAL VISITS**

Free wireless internet available

WiFi: WIFI HALLS ou ESPACE 1968

Welcome Messages

Welcome Message from the ISHS

Welcome to the 9th International walnut and pecan symposium, convened under the auspices of the ISHS. On behalf of the ISHS board, may I take this opportunity to thank the convenors of this symposium: Fabrice Lheureux, Eloise Tranchand and Delphine Sneedse.

May I also extend my thanks to all the other people who have helped develop the scientific program, review the abstracts and the papers, and all those who have assisted with the general organization of this symposium. From my own experience I know just how difficult and challenging it is to organize such an event, and thus - as a Society - we are forever grateful for the sacrifices our members make in facilitating and encouraging the transfer and sharing of knowledge.

For this event, we are joined by more than 160 participants from 21 countries.

Fortuitously, while the challenges of the global pandemic are largely behind us, we once again have the opportunity to meet in person.

I believe there is no substitute for face-to-face meetings and the opportunities these provide in establishing new relationships and indeed, in renewing and strengthening our professional networks with fellow researchers and industry.

This symposium is an excellent example of what ISHS is seeking to achieve. Our new vision statement portrays ISHS as the world's leading independent organization of horticulturists acting as a globally recognized and sought-after platform for research, science-based information exchange and collaboration in support of sustainable innovation in horticulture.

For this event, we have collaborated with the Interprofessional Technical Centre for Fruits and Vegetables (CTIFL) - a leader in applied research for the fruit and vegetable sector - and two French regional experimental stations: Senura and Station de Creysse.

This collaboration provides a unique link between fundamental science, applied research, extension and industry. Today, we face a number of challenges associated with climate change, the lack of water, food insecurity, sustainability, and poor nutrition and diet. While Horticulture is a major contributor to many of these global issues, we are also part of the solution.

Over the next three days, we will hear from 5 distinguished keynote speakers and - from the 48 oral presenters and 24 posters - focus on issues such as germplasm, genetics, breeding, climate change, soil quality, orchard management and pest and disease control.

Welcome Messages

In parallel with the symposium, a trade show will bring together the industry's key players (machinery, logistics, processing), where professionals from the walnut and pecan industry may discover the latest technological innovations and talk to scientists.

Be sure not to miss the technical tour on Friday and the many social events that are planned for the next week - this is an excellent opportunity for you to enjoy French cuisine and « art de vivre » !!!

Enjoy this symposium and the opportunities it presents to engage with the best international experts in this field.



Francois Laurens
President of ISHS

Welcome Messages

Welcome Message from the Organisers

The Centre Technique Interprofessionnel des Fruits et Légumes (CTIFL) and the Station Expérimentale Nucicole Rhône-Alpes (SENuRA), with the support of the Station Expérimentale de la noix de Creysse, are delighted to host and organise the 9th International Walnut and Pecan Symposium.

We would like to thank the Interprofession des Fruits et Légumes (INTERFEL), the walnut industry, the ISHS and all the partners who have enabled us to organise this event in the heart of the Grenoble walnut production area.

This fruit has a long history in France, dating back to prehistoric times when the first traces of walnut consumption were found. We therefore wanted to bring together the international scientific community, as well as walnut and pecan professionals from different regions of the world, at the place of its origin. We are convinced that this will stimulate exchanges and the sharing of knowledge.

The year 2022-2023 has seen prices collapse, with extreme weather conditions impacting tree physiology and production (high temperatures, drought, early frosts, etc.). At the same time, society is becoming increasingly demanding in terms of the environment and public health, forcing the nut sector to take up a number of challenges. Moreover, walnuts and pecans convey an image of naturalness that it's important to maintain and promote. They are also two fast-growing trees that can be used in new agro-ecological cropping systems, making them pillars of resilience in our farming systems.

For all these reasons, we are proposing a symposium focused on the new challenges related to climate change and societal constraints.

It is only by starting from the roots that we can build tomorrow together.

Enjoy the symposium!

Organisers



The purpose of the ISHS is "...to promote and encourage research and teaching in all branches of horticultural sciences and to facilitate worldwide cooperation and transfer of knowledge through its symposia and congresses, publications, and scientific structure." Membership is open to all interested researchers, educators, students, and horticultural industry professionals.

The **International Society for Horticultural Science** – abbreviated to ISHS – is a truly global network of over 70,000 individuals, universities, governments, institutions, libraries, and commercial companies, thousands of whom have joined as individual members, in addition to a significant number of institutional members and some 50 member countries/regions.

ISHS is a major source of up-to-date information on horticultural research worldwide. ISHS aims to promote research in all branches of horticulture. It encourages the development of international co-operation, bringing together scientific and technical professionals to stimulate, facilitate and coordinate research and scientific activities on a global scale.

ISHS Mission Statement: To nurture and deploy growing scientific knowledge to create a better world.

www.ishs.org

ISHS activities during the symposium

ISHS Business Meeting

Wednesday June 14, from 17:20,
in the auditorium

All members are invited to attend
the Business Meeting

ISHS Young Minds Awards Ceremony

Thursday June 15, from 16:00,
in the auditorium

Two Young Mind Awards for junior scientists
will be given: one award for the best oral pre-
sentation and one award for the best poster
presented



Organisers



The Centre Technique Interprofessionnel des Fruits et Légumes – CTIFL – is the research and development organization serving the fruit and vegetable industry, from production to distribution. As a pivotal point at the crossroads of fundamental research, applied research, and innovation, the CTIFL works directly with professionals. It is the key player to help them meet the challenges of competitiveness, innovation, and sustainable production and thus contribute to guaranteeing the quality and accessibility of the products that consumers expect. To achieve its objectives, CTIFL conducts experimentation and research programs, innovation initiatives, economic and regulatory monitoring, training, and dissemination of information to professionals. Recognized as a competent authority, CTIFL is in charge of the control and certification of fruit propagation materials, except strawberry plants. Located in the heart of the main French fruit and vegetable production areas, the 5 CTIFL centers, in partnership or association with the regional experimentation stations, constitute a unique experimentation network in Europe.

www.ctifl.fr



Since 1993, SENURA is the reference nucicultural experimentation station for the southeast basin. Created by and for Nut growers, its mission is to meet the expectations of professionals in terms of innovation and applied research, to improve the performance of their farms. Each year, the station conducts around forty trials, enabling it to progress in the Nut sector at both national and European level's objective: to produce high-level experimentation, allowing innovative results!

SENURA's activities are grouped around four main themes: applied research (conducting experimentation programs to address the problems of the nut sector), the implementation of registration trials in conjunction with firms, the production of technical studies to develop a tool or a method at the request of stakeholders in the sector, the dissemination of results and innovative techniques to producers.

www.senura.com



Experimental Station is based at Creysse, a touristic village in a land named Quercy (Lot), close to the Dordogne valley. Created and managed by producers since 1987, the Experimental Station of Creysse is a place of research and exchange for the South-West Walnut sector. Our role is to improve technical and economic efficiency of walnut orchard. For this we have at our disposal a 30 ha orchard as well as the support of many producers at whom to set up trials. Main theme worked is the selection of performant plant material, well adapted to French culture conditions. We also make research on orchard management, mainly on grass management and on density/pruning those last years. Last, we observe pests and disease to improve biological cycle knowledges and to find biocontrol solutions.

www.facebook.com/stationcreysse

With the support of



Created in 1976, INTERFEL, the Fresh Fruit and Vegetable Interprofession, brings together all the fresh fruit and vegetable trades. All the stages representing the trades in the sector are represented: production, cooperation, economic governance, shipping, import/introduction, shipping/export, wholesale, distribution (and supermarket specialized shops and collective catering).

www.interfel.com

Committees

Scientific Committee

- **Fabrice Lheureux**, CTIFL, France
- **Delphine Sneedse**, SENURA, France
- **Eloïse Tranchand**, Station expérimentale de Creysse, France
- **Elisabeth Dirlwanger**, INRAE, France
- **Neus Aleta**, IRTA, Spain
- **Anita Solar**, University of Ljubljana, Slovenia
- **Kourosh Vahdati**, FAO CIHEAM Nut Network, Iran
- **Geza Bujdosó**, Fruit Growing Research Institute, Hungary
- **Roberto Botta**, UNITO, Italy
- **Liliana Cichone**, INTA, Argentina
- **Chuck Lesli**, University of California, USA
- **Pat J. Brown**, University of California, USA
- **Richard Heerema**, NMSU, USA

Organising Committee

- **Fabrice Lheureux**, CTIFL, France
- **Karima Giresse**, CTIFL, France
- **Guillaume Reveau**, CTIFL, France
- **Stéphane Dupré**, SENURA, France
- **Christian Mathieu**, SENURA, France
- **Eloïse Tranchand**, Station expérimentale de Creysse, France
- **Eric Brajeul**, CTIFL, France
- **Jean-Marc Goachet**, CTIFL, France

Keynote Speakers



PAT J. BROWN is a tree nut breeder and Associate Professor in the Dept. of Plant Sciences at UC Davis, where he leads the Walnut Improvement Program and the Pistachio Improvement Program. He received his Ph.D. in Plant Biology from Cornell University in 2008, completed a postdoc at Cornell from 2008-2010, and advanced from Assistant to Associate Professor at the University of Illinois, Urbana-Champaign in the Dept. of Crop Sciences from 2010-2017 before coming to UC Davis. Dr. Brown's research focuses on integrating genomic and phenomic data into applied plant breeding programs. Target traits in both walnut and pistachio include precocity, kernel quality and composition, and modifying phenology and abiotic stress tolerance to improve resilience to climate change.

SESSION I : GERMPLASM, GENETICS, BIOTECHNOLOGY

Conference time: Tuesday, June 13, morning (09:00 – 09:45)

Harnessing genetic diversity in Juglans for sustainable walnut production

Pat J. Brown, UC Davis

Walnut production is threatened by both biotic factors (*Xanthomonas* blight, insect pests, soil-borne pathogens, and cherry leaf roll virus or CLRV) and abiotic factors (declining winter chill, extreme heat, and water deficit/salinity). Both these threats are characterized by uncertainty: uncertainty about how quickly chemical inputs for biotic control will be phased out, and uncertainty about how climate change will impact produc-

tion in different walnut growing regions. Adoption of new scion and rootstock cultivars is the most cost-effective long-term solution for the walnut industry, but carries significant short-term risk for individual growers.

In this presentation I will highlight our efforts in the California Walnut Improvement Program (WIP) to generate new biological knowledge, breeding tools, and improved cultivars of walnut scions and rootstocks. Molecular data are having an increasing influence on scion breeding decisions, but the mutations underlying critical allelic differences remain unknown. An international collaboration to catalog global genetic diversity in *Juglans regia* resulted in the discovery of a selective sweep possibly associated with walnut domestication. Internal collaboration at UC Davis resulted in a new method for quantifying resistance to *Xanthomonas* blight and revealed a new source of potential resistance.

Diversity across the *Juglans* genus remains largely untapped for both rootstock and scion improvement. I will present our strategy for efficient generation and genotyping of *Juglans* hybrids. A large collaborative effort screening *J. microcarpa*/*J. regia* hybrid rootstocks for resistance to multiple soil-borne pathogens unexpectedly revealed a locus with large effects on crown gall resistance, *Phytophthora* resistance, and vigor. Backcrossing to *J. regia* is being used to develop CLRV-tolerant rootstocks that maintain vigor and stress resistance comparable to hybrids.

Adoption of any new tree cultivar carries a risk. Our goal in the WIP is to enable individual growers to make data-driven decisions by providing quantitative data, from relevant environments, with complete transparency.

Keynote Speakers



THIERRY AMÉGLIA (INRAE PIAF, Clermont-Ferrand, France) is a senior scientist of the AgroEcoSystem Department at INRAE (French National Research Institute for Agriculture, Food and Environment). He is an ecophysiologicalist focusing on water relation and winter biology of trees, urban forestry and smart cities, and on biosensors for tree growth and tree vitality. He has published more than 120 papers in peer-reviewed journals and produced 2 licences to knowledge (Xyl'em: a device for measuring the rate of gas embolism in tree branches and petioles. e-PepiPIAF: a wireless, autonomous and connected system for monitoring and assessing the growth and vitality of trees (resistance to drought and frost, etc.) which measures, memorizes and remotely transmits micro-variations in organ diameter (sensitivity below the micron) and air temperature to the point of measurement, without disrupting its operation. Most of these papers on water functioning and winter biology have focused on walnut trees.

SESSION II : PLANT PHYSIOLOGY

Conference time: Wednesday June 13, afternoon (14:50 – 15:35)

Ecophysiological functioning of walnut and main risks in a changing climate

Drought and frost stresses are the most important limiting factors that determine the ecological distribution and production of tree species.

Walnut, in particular, has a low resistance to edaphic drought and frost, which explains its development in lowland areas with deep and fertile soils and its low development at high elevation in our climates.

The ecophysiological tools developed in the laboratory (determination of hydraulic conductance, carbon reserve, water potential, electrolyte leakage and continuous monitoring of trunk or branch diameter variations) allow us to evaluate the risks of drought or frost death throughout the tree's development cycle and to understand the periods of greatest sensitivity to these risks.

The construction of mechanistic models, based on physiological parameters that vary according to climatic data, makes it possible to predict these risks in future climates and to propose risk maps according to these constraints.

Keynote Speakers



CATHERINE BAROS is responsible for consumer studies at CTIFL. Combining expertise in marketing, sociology and economics, she is specialized in food consumption analysis. In CTIFL, she carries out qualitative and quantitative studies on fruit and vegetable purchase and consumption among French consumers: perception, purchase pattern, knowledge of production methods, and their readiness/willingness to pay for 0 herbicides / organic products, labels ... She studies their behavior, in the kitchen, at home and out of home, and takes part in European projects such as Horizon Europe project "Good". She also co-leads a working group devoted on Food Transition within the framework of the RMT Filarmoni (mixed technological network) bringing together animal and plant sectors, technical institutes and academic partners.

SESSION III: PRODUCTION, HARVEST, FRUIT QUALITY AND MARKETING

Conference time: Wednesday June 14, morning (08:45 – 09:30)

Food consumption trends, purchase of fruits & vegetables

The covid crisis has accelerated some tendencies in the food consumption, and habits are coming back. Furthermore, in the short term, the inflation in France has an influence on the purchase of most households. It is already necessary to adapt our consumption to the climatic change. The revegetation of food on the way may be a solution and an opportunity to develop the consumption of walnut and pecan, at home and away from home

Keynote Speakers



DANIEL WIPF is a professor at the University of Burgundy in Dijon. He leads the Mycorrhizae team of the Agroecology Unit (INRAE). His research group has a recognized expertise in the study of the development of arbuscular mycorrhizal symbiosis. It has focused on the early cellular processes involved in the fungal host recognition mechanisms as well as on the nutrient transfer mechanisms at the biotrophic interface. The team is and has been involved in several national and international projects related to molecular genetics, agricultural relevance and functional genomics of plant-microbe interactions.

Daniel Wipf has published more than 70 papers. He has a long experience in collaborative projects: he has been coordinator or partner of several academic projects in Germany and France (German Science Foundation (DFG), French Ministry of Research, Regional Council of Burgundy, COST, DAAD, PROCOPE...), as well as projects in collaboration with industrial partners (ANRT, ANVAR, OSEO, Regional Council of Burgundy Franche Comté). Daniel Wipf is an expert for several national and international structures.

SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE

Conference time: Wednesday June 14, morning (10:50 – 11:35)

Is crop happiness under our feet?

Soils are a resource threatened by increasing anthropogenic pressures (IPBES, 2018). Some agricultural practices are the cause of physical degradation of soils, but also of biological degradation, with a decrease in biodiversity and soil organic matter. Other so-called agroecological farming practices, on the contrary, have a positive impact on soil biodiversity. The talk will review agricultural practices in the broad sense of the term, with a focus on their impact on or integration of soil biodiversity, in the light of current societal and environmental challenges.

Keynote Speakers



FLORENT TROUILLAS is an Associate Professor of Cooperative Extension with the Department of Plant Pathology at the University of California, Davis and the Kearney Agricultural Research and Extension Center. He received a PhD in Plant Pathology in 2009 from the University of California, Davis. Dr. Trouillas specializes in fruit and nut crop pathology and his activities include basic and applied research that aims to elucidate the etiology and biology of plant diseases, and develop Integrated Pest Management strategies. He has established a broad research program that investigates canker, soil borne as well as fruit and foliar diseases of almond, cherry, olive, peach, pistachio, and walnut. His research investigates fungal and bacterial taxonomy, phylogenomic, the molecular detection of plant pathogens as well as the development of biocontrol solutions and cultural alternatives to chemical fungicides. His cooperative extension and education activities include the training of farmers and pest control advisers on disease diagnosis and management. He also serves as a lecturer for various specialized courses in Plant Pathology.

SESSION V: PESTS AND DISEASES

Thursday June 15, morning (08:45 – 09:29)

Climate change and plant diseases: opinions, trends, and case studies

Climate change refers to long-term shifts in temperatures and weather patterns. Although these shifts may occur naturally, human activities since the 1800's have been broadly accepted as the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil and gas. One major aspect of climate change is the increase of extreme weather events, including cold and heat waves, drought, heavy precipitations, floods and storms. In the current scenario of rapidly evolving climate change and high frequency of extreme weather events, plants are more frequently subjected to stresses of both abiotic and biotic origin. Because most plant pathogens respond to weather, changes in weather events due to climate change are likely to impact the frequency and severity of disease epidemics, thus threatening the global food supply. Numerous scientific reviews have attempted to foresee the impacts of climate change on plant health. Yet, scenario analysis of the potential impact of climate change on plant pathogens are limited. While the impacts of climate change are not easily determined, these could have positive, negative or no impact on individual plant diseases and will vary by region and by crop. Adverse impacts may include disease emergence and outbreaks, increased yield losses, the inefficacy of management strategies and changes in the geographical distribution of plant pathogens. The present review will summarize common opinions and trends related to climate change and plant diseases. Global case studies, adaptation strategies and field observations in California forests and fruit and nut crops will be discussed.

Monday 12 June

19:00 – 20:00

WELCOME RECEPTION IN THE EXHIBITION AND WELCOME SPEECHES

Welcome addresses by :

- **Christian Mathieu**, SENURA President
- **Ludovic Guinard**, CTIFL Deputy General Director
- **Marc Fesneau**, French Minister of Agriculture TBC
- **Yannick Neuder**, Auvergne-Rhône-Alpes Region councillor
- **Jean-Pierre Barbier**, President of the Isère Department
- **Jean-Claude Darlet**, President of the Isère Chamber of Agriculture
- **Jean-Pierre Gaillard**, President of the Crédit Agricole Sud Rhône-Alpes
- **Fabien Mulyk**, Vice-President of the Isère Departmental Council

The Welcome Cocktail is kindly sponsored by



CREDIT AGRICOLE

Tuesday 13 June

08:45 – 09:00	INTRODUCTION Giulia Marino , the Temperate tree nut division Chair at ISHS François Laurens , ISHS President (video)
09:00 – 10:25	SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY (Part 1) Chairpersons: Pat J Brown, Fabrice Lheureux
09:00 – 09:45	Keynote Lecture (KL1): Harnessing genetic diversity in Juglans for sustainable walnut production Pat J. Brown (United States)
09:45 – 09:55	Posters presentations (see list page 26, P01 to P09b)
09:55 – 10:25	Oral presentations
09:55	(OC02): Growth of tall, unpruned bare rooted Chandler walnut trees on clonal Paradox VX211, RX1, and Vlach rootstock 2015-2022 Janine Hasey , Luke Milliron, Clifford Beumel, Clarissa Reyes, Charles Brannon, Dr. Bruce Lampinen (University of California, USA)
10:10	(OC03): Individual leaf area variation in a provenance collection of pecan (Carya illinoensis) Cristina Pisani, Jennifer Randall, Quentin Read, Angelyn Hilton, Xinwang Wang, Warren Chatwin, Patrick Conner, Jordan Brungardt, Lenny Wells, Richard Hereema, Clive Bock (United States Department of Agriculture, USA)
10:25 – 10:55	Coffee break
10:55 – 11:55	SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY (Part 2) Chairpersons: Pat J Brown, Fabrice Lheureux
10:55 – 11:55	Oral presentations
10:55	(OC04): Growth of bare root June budded Chandler walnut trees compared to potted micrografted finished trees on clonal Paradox RX1 rootstock Janine Hasey , Luke Milliron, Clifford Beumel, Dr. Bruce Lampinen (University of California Coop. Extension, USA)

Tuesday 13 June

11:10 (OC05) : Field testing of resistance of novel hybrid clonal walnut rootstocks to soilborne biotic stresses
Dr. Katherine Jarvis-Shean , Janine Hasey, Charles Leslie, Dr. Greg Browne, Dr. Ali McClean, Natalia Ott, Dr. Andreas Westphal, Dr. Daniel Kluepfel (University of California, USA)

11:25 (OC06): Identifying walnut rootstocks with resistance to multiple soil-borne plant pathogens
Dr. Andreas Westphal , Dr. Zin Thu Zar Maung, Tom Buzo, Dr. Patrick Brown, Charles Leslie, Dr. Greg Browne, Natalia Ott, Dr. Ali McClean, Dr. Dan Kluepfel (University of California Riverside, USA)

11:40 (OC08): Influences of rootstocks on pecan scion growth in a replicated test orchard
 Dr. Xinwang Wang, Mr. Keith Kubenka, Dr. Angelyn Hilton, Mr. Braden Tondre, Dr. Warren Chatwin, Dr. Cristina Pisani, Dr. Clive Bock, **Dr. Richard Heerema** , Dr. Jennifer Randall (United States Department of Agriculture, USA)

11:55 – 13:45 Lunch break

13:45 – 14:15 SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY (Part 3)
 Chairpersons: Pat J Brown, Fabrice Lheureux

13:45 – 14:15 Oral presentations

13:45 (OC11): Behavior of five walnut rootstocks in 'Serr' and 'Chandler', under the edaphoclimatic conditions in O'Higgins and Coquimbo regions, Chile
Ms. Giovanni Lobos , Ms. Jaime Otarola, Ms. Gamalier Lemus (Instituto de Investigaciones Agropecuarias, Chile)

14:00 (OC11b) Phenological and pomological comparison of "Diriliş" and "Chandler" cultivars
Assoc. Prof. Mehmet Sutyemez , Dr. Akide Ozcan, Dr. S.Burak Bukucu (Univ of Kahramanmaras sutcu imam, Faculty of Agriculture, Dept. of Horticulture, Turkey)

Tuesday 13 June

14:15 – 16:00

SESSION II: PLANT PHYSIOLOGY (Part 1)

Chairpersons: Thierry Améglio, Richard Heerema, Fabrice Lheureux

14:15 – 15:00

Keynote Lecture (KL2): Ecophysiological functioning of walnut and main risks in a changing climate

Thierry Améglio (INRAE, France)

15:00 – 16:00

Oral Presentations



15:00

(OC12): Presence of different phenolic groups in various tissues of *J. regia*

Mr. Aljaz Medic, Prof. Dr. Anita Solar, Prof. Dr. Hudina Metka, Prof. Dr. Robert Veberic (University of Ljubljana, Slovenia)

15:15

(OC14): Annual evapotranspiration of pecan tree in an arid and hot zone in Mexico

Prof. Dr. Julio Cesar Rodriguez, Prof. Dr. Salah Er-raki, Prof. Dr. Fidencio Cruz-Bautista (Universidad de Sonora, Mexico)

15:30

(OC15): Seasonal Crop evapotranspiration and crop coefficient of pecan walnut in arid region of Mexico

Prof. Dr. Salah Er-Raki, **Prof. Dr. Julio Cesar Rodriguez**, Prof. Dr. Fidencio Cruz-Bautista, Prof. Dr. Carlos Lizarraga-Celaya, Prof. Dr. Alejandro E Castellanos-Villegas, Prof. Dr. Abdelilah Meddich, Prof. Dr. Andres Ochoa-Meza (University Cadi Ayyad, Morocco)

15:45

(OC16): Pecan nut weight is dependent on local shoot carbon supply-demand balance

Dr. Richard Heerema, Dr. Ciro Velasco Cruz, Isaiah Apodaca, Claudia Galvan, Dr. Omar Holguin (New Mexico State University, USA)

16:00 – 16:30

Coffee break

Tuesday 13 June

16:30 – 17:15

SESSION II: PLANT PHYSIOLOGY (Part 2)

Chairpersons: Thierry Améglio, Richard Heerema

16:30 – 17:15

Oral Presentations

16:30

(OC18): Photosynthesis in pecan tree under different management conditions in the Northwest México

Prof. Dr. Julio Cesar Rodriguez (Universidad de Sonora, Mexico)

16:45



(OC19): Variation of bioactive compounds, fatty acids and volatile profile of walnuts (*Juglans regia* L.) during harvest and postharvest handling

Benedetta Ms. Fanesi, Marco Vanacore, Eugenio Cozzolino, Roberta Foligni, Ancuta Nartea, Samuele Crescenzi, Matteo Zucchini, Veronica Giorgi, Davide Neri, Deborah Pacetti, Paolo Lucci (Università Politecnica delle Marche, Italy)

17:00

(OC20): Yield of 'Chandler' walnut according to PAR interception and crop load: effect of pruning

Prof. Gabino Reginato, Miguel Valenzuela, Assoc. Prof. José Luis Henríquez (University of Chile, Chile)

Wednesday 14 June

08:45 – 10:23 **SESSION III: PRODUCTION, HARVEST, FRUIT QUALITY AND MARKETING**
Chairpersons: Catherine Baros, Guillaume Reveau, Anita Solar

08:45 – 09:30 **Keynote Lecture (KL3): Food consumption trends, purchase of fruits & vegetables**
Catherine Baros (CTIFL, France)

09:30 – 10:15 **Oral presentations**

09:30 **(OC21): Towards the geographical traceability of the Italian walnut: a case study based on stable isotopes signatures ($\delta(2H)$, $\delta(18O)$, $\delta(13C)$, $\delta(15N)$, $\delta(34S)$) and elemental fingerprinting**
Erica A. Di Piero, Pietro Franceschi, Daniela Bertoldi, Luca Ziller, Agostino Tonon, Roberto Larcher, Luana Bontempo, Federica Camin, Michela Troggio (Centro Ricerca e Innovazione, Fondazione Edmund Mach, Italy)

09:45 **(OC22): The effect of cultivar, pressing temperature and kernel quality on the yield of walnut oil and its phenolic content**
Dr. Anita Solar, Assoc. Prof. Ana Slatnar, Prof. Dr. Franci Stampar, Prof. Dr. Metka Hudina, Prof. Dr. Robert Veberic (University of Ljubljana, Slovenia)

10:00 **(OC23): The influence of the harvest time and duration of drying on the quality of walnuts**
Dr. Anita Solar, Prof. Dr. Rajko Vidrih, Aljaz Medic, Prof. Dr. Robert Veberic, Prof. Dr. Metka Hudina (University of Ljubljana, Slovenia)

10:15 – 10:20 **Poster presentations (see list page 27, P10 to P14)**

10:20 – 10:50 **Coffee break**

10:50 – 12:20 **SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE (Part 1)**
Chairpersons: Daniel Wipf, Giuseppe Ferrara, Delphine Sneedse

10:50 – 11:35 **Keynote Lecture (KL4) : Is crop happiness under our feet?**
Daniel Wipf (INRAE, France)

Wednesday 14 June

- 11:35 – 12:20** **Oral presentations**
- 11:35** **(OC24): Pecan cultivation in Puglia region, Southeastern Italy: fruits and truffle production**
Assoc. Prof. Giuseppe Ferrara , Prof. Dr. Leonardo Lombardini, Dr. Andrea Mazzeo, Dr. Giovanni Luigi Bruno (Università di Bari, Italy)
-
- 11:50** **(OC25): French Pecan project - Adaptation of arboriculture to climate change through agroforestry pecan cultivation in France**
 Mr. Fabien Balaguer, **Mr. Mathieu Duflos** (France Agroforesterie, France)
-
- 12:05** **(OC26): Performance of micropropagated walnut orchards trained to central leader in Emilia-Romagna, Italy**
Dr. Daniela Giovannini , Dr. Federica Brandi, Mr. Sandro Sirri, Dr. Francesca Massetani, Dr. Eugenio Cozzolino, Prof. Dr. Davide Neri (CREA, Italy)
-
- 12:20 – 12:50** **Industry Session: UNITEC – Treenut grading, sorting and electronical sizing solutions**
 Mr Luca Montanari, UNITEC S.p.A., Sales Manager, Italy
-
- 12:50 – 14:05** **Lunch break**
-
- 14:05 – 15:50** **SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE (Part 2)**
 Chairpersons: Daniel Wipf, Giuseppe Ferrara, Delphine Sneedse
-
- 14:05 – 15:50** **Oral Presentations**
- 14:05** **(OC28): Financial and design aspects of walnut agroforestry in the UK**
Prof. Dr. Steve M. Newman , Mr. Tom Tame (BioDiversity International Ltd, United Kingdom)
- 14:20** **(OC29): Effects of crop covers in walnut orchards**
Delphine Sneedse , Eloïse TRANCHAND (SENURA, France)
- 14:35** **(OC30): Use of mechanical hedge pruning to transition southeastern U.S. pecan production to a more profitable and sustainable system**
Lenny Wells (University of Georgia, USA)
- 14:50** **(OC31): High density walnut management**
Mr. Gustavo Mendoza , Vittorio Bianchini, Miguel Carus (Nogaltec, Chile)

Wednesday 14 June

15:05	<p>(OC32): Characteristics of spray coverage from large pecan orchard air-blast sprayers Dr. Clive Bock, Dr. Ted Cottrell, Dr. Michael Hotchkiss (United States Department of Agriculture, USA)</p>
15:20	<p>(OC33): Improving pecan nut yield by applying Kelpak® during flowering Pedro Larrain, Dr. Heino Papenfus (KELPAK, Chile)</p>
15:35	<p>(OC34): Surveying fungal diversity in pecan orchards of the Southwestern USA McKenzie Stock, Dr. Richard J. Heerema, Dr. Jennifer J. Randall, Dr. Nicole Pietrasiak (New Mexico State University, USA)</p>
15:50 – 16:20 Coffee break	
16:20 – 17:20	<p>SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE (Part 3) Chairpersons: Eloise Tranchand, Marine Barbedette, Clive Bock</p>
16:20 – 17:20	<p>Oral Presentations</p>
16:20	<p>(OC35): SysNoix, a French innovative project to answer tomorrow's needs Marine Barbedette, Marianne Ms. Naudin (SENURA, France)</p>
16:35	<p>(OC36): Ecklonia maxima seaweed extract improves nut set and nut size of 'Chandler' walnuts trees Pedro Larrain, Alejandro Ochagavia, Hector Tabilo (KELPAK, Chile)</p>
16:50	<p>(OC37): Mitigation of salinity stress in 'Chandler' walnuts by the soil application of Ascophyllum nodosum extracts: effects on growth, yield and its impact on physical and biological soil properties Prof. Victor Beyá-Marshall, Mr. Francisco Quintanilla, Prof. Dr. Thomas Fichet (University of Chile, Chile)</p>
17:05	<p>(OC38): Evaluation of different training techniques in walnut orchard Veronica Giorgi, Marco Vanacore, Samuele Crescenzi, Matteo Zucchini, Eugenio Cozzolino, Prof. Dr. Davide Neri, Dr. Daniela Giovannini (CREA, Italy)</p>
17:20 – 18:20	<p>ISHS Business Meeting</p>



Thursday 15 June

08:45 – 10:35	SESSION V: PESTS AND DISEASES (Part 1) Chairpersons: Florent Trouillas, Yohana Laloum, Gaurab Bhattarai
08:45 – 09:29	Keynote Lecture (KL5): Climate change and plant diseases: opinions, trends, and case studies. Florent Trouillas (University of California, USA)
09:29 – 09:35	Poster presentations (see list page 28, P15 to P20)
09:35 – 10:35	Oral Presentations
09:35	(OC40): The characterization of xanthomonas arboricola pv. juglandis strains from bacterial blight and brown apical necrosis of walnuts in Turkey Dr. Damla Ertimurtas , Prof. Dr. Hatice OZAKTAN (Ege University, Turkey)
09:50	(OC41): Evaluation of the effectiveness of a bacteriophage-based formulation in laboratory and field trials on Xanthomonas arboricola juglandis Lydie Leymarie Lachaud , Dr. Camila Morales, Sofía Bustos, Héctor Apablaza, Dr. Fernanda Flores, Marie-Neige Hébrard, Dr. Patricia Jargeat, Dr. Pablo Núñez (Agroadvance SpA and omité des fruits à coques du Lot, France)
10:05	(OC42): Phenotypic behaviour and assessing phage sensitivity in pathogenic Xanthomonas arboricola pv. juglandis Dr. Tamas Kovacs, Dr. Maroua Oueslati , Ms. Dominika Bali (Biopesticide Ltd, Hungary)
10:20	(OC42b): A novel bacteriophage-based solution against Xanthomonas arboricola pv. juglandis: Natural approach for organic walnut production Dr. Tamas Kovacs , Ms. Naila Bounedjoum, Ms. Dominika Bali, Prof. Gabor Rakhely (Biopesticide Ltd., Hungary)
10:35 – 11:05	Coffee break



Thursday 15 June

11:05 – 12:35

SESSION V: PESTS AND DISEASES (Part 2)

Chairpersons: Cyrielle Masson, Florent Trouillas, Gaurab Bhattarai

11:05 – 12:35

Oral Presentations

11:05

(OC43): Epidemiology and Management of Botryosphaeria Canker and Blight of Walnut in California

Dr. Themis Michailides, Mr. Victor Gabri, Mr. David Morgan, Dr. ShuaiFei Chen, Mr. Giuseppe Fiore (University of California-Davis, USA)

11:20

(OC44): Investigation on the involvement of Botryosphaeriaceae in recent walnut dieback in French orchards

Dr. Yohana Laloum, Ms. Cyrielle MASSON, Ms. Marie-Neige Hébrard, Ms. Aude MORONVALLE, Dr. Flora Pensec, Dr. Adeline Picot, Ms. Marie Belair, Prof. Gaëtan Le Floch, Ms. Agnès Verhaeghe (CTIFL, France)

11:35

(OC45): Colletotrichum acutatum in French walnut orchards – improving knowledge on the behavior of the fungus and its host

Ms. Cyrielle Masson, Ms. Marine Barbedette, Ms. Lucie Leurs (SENURA, France)

11:50

(OC46): Etiology of walnut fruit rot and twig dieback in South-Western France

Dr. Florent Trouillas, Ms. Marie-Neige Hébrard, Ms. Violette Aurelle, Dr. Patricia Jargeat, Ms. Eloise Tranchand (University of California, USA)

12:05

(OC47): Transcriptome analysis under pecan scab infection reveals the molecular mechanisms of the defense response in pecan

Mr. Gaurab Bhattarai, Prof. Dr. Patrick J Conner, Prof. Dr. Jennifer J Randall, Dr. Horat Shadgou Rhein (University of Georgia, USA)



12:20

(OC54): Using a double-sided volute sprayer to control scab in tall pecan trees

Dr. Clive Bock, Dr. Michael Hotchkiss, Mr. Buck Paulk (United States Department of Agriculture, USA)

12:35 – 13:05

Industry Session: MONCHIERO – *How to reduce harvesting costs*

Mr Massimo Monchiero, Monchiero & C. S.n.c., Italy

13:05 – 14:00

Lunch time

Thursday 15 June

14:00 – 15:30	SESSION V: PESTS AND DISEASES (Part 3) Chairpersons: Ghais Zriki, Robert Van Steenwyk, Solène Travaillard
14:00 – 15:30	Oral Presentations
14:00	(OC48): Discovering and improving microbial biocontrol methods for managing key pecan pests Dr. David Shapiro-Ilan (United States Department of Agriculture, USA)
14:15	(OC49): Pilot-scale field trial of Sterile Insect Technique for codling moth management in walnut orchards Dr. Ghais Zriki , Mr. Jean-Michel Leyre, Ms. Stéphanie Blachon, Jean-Baptiste Philibert, Jean-Michel Ricard, Ms. Agnès Verhaeghe (CTIFL, France)
14:30	(OC50): Efficacy and persistence of the entomopathogenic fungi and nematodes on walnut husk fly Dr. Jhalendra Rijal , Dr. Sudan Gyawaly, Chang Vue (University of California-Davis, USA)
14:45	(OC51): Preliminary findings on the improved monitoring of walnut husk fly through a new pheromone lure Dr. Robert Van Steenwyk , Dr. Spencer Walse, Dr. Dan Kuzmich, Ms. Melissa Thayer (University of California, Berkeley, USA)
15:00	(OC52): Analysis of the nutritional content of the Green Walnut Husk (GWH) and perspectives for the Walnut Husk Fly (<i>R. completa</i>) larval diet development Solène Travaillard , François Verheggen (SENURA, France)
15:15	(OC53): Understanding seasonal biology and exploring detection tools for Pacific flatheaded borer in walnut orchards in California Dr. Sudan Gyawaly , Dr. Jhalendra Rijal (University of California, USA)
15:30 – 16:00	Coffee Break
16:00 – 17:00	CLOSING SESSION <ul style="list-style-type: none"> • Closing Speech • ISHS Young Minds Awards Ceremony • ISHS Medal and Certificates to the Symposium's conveners • Announcement of the next Symposium organizers

Posters

SESSION I: GERMPLASM, GENETICS, BIOTECHNOLOGY

These posters will be presented on June 13, from 09:45 - 09:55

- (P01)** **Determining the chilling requirements to overcome dormancy of three pecan nut cultivars**
Dr. Neus Aleta Soler (IRTA, Spain)
- (P02)** **Seasonal dynamic of sap macro and micro elements composition in walnut (*Juglans regia*) cv. Lara**
Dr. Julien Toillon (ANPN (Association nationale des producteurs de noisettes), France)
- (P03)** **Climate change and walnut budbreak phenology: Assessing cultivar-specific chill and heat requirements in NE Spain**
Dr. Neus Aleta Soler (IRTA, Spain)
- (P04)** **Application of BBCH codification to walnut (*Juglans regia* L.) phenophase**
Dr. Julien Toillon (ANPN (Association nationale des producteurs de noisettes), France)
- (P05)** **Environmental suitability of walnut (*Juglans regia*) in south-central Chile under projected climate changes**
Prof. Gabino Reginato (University of Chile, Chile)
- (P06)** **GERMAINE, CHARLETTE and DORIANNE: three new French varieties being registered for a release in 2025, a tribute to three figures of walnut sector development in France**
Ms. Eloïse Tranchand (Station expérimentale de la noix de Creysse, France)
- (P07)** **Horticultural field performance of new putative resistant walnut rootstock genotypes compared to seedling Paradox and standard clonal Paradox rootstocks**
Janine Hasey (University of California Coop. Extension, USA)
- (P08)** **Microsatellite fingerprinting and evaluation of genetic relationship for new perspective walnut genotypes from Nikita Botanical Gardens**
Dr. Sergey Khokhlov (Nikita Botanical Gardens, Russia Federation)
- (P09)** **Agronomic and quality evaluation of pecan tree varieties collection in the Southwest of Spain**
Dr. Margarita López Corrales (CICYTEX (Centro de Investigaciones científicas y tecnológicas de Extremadura), Spain)

Posters

(P09b) Phenology of ten pecan cultivars in two well differenced regions of Spain

Dr. Margarita López Corrales, María Guadalupe Ms. Domínguez Yagüe, Dr. Abelló Laia, Dr. Ana María Fernández, Mr. Cordero Manuel, Mr. Fernando Pérez Gragera, Dr. Neus Aletà (CICYTEX (Centro de Investigaciones científicas y tecnológicas de Extremadura), Spain)

SESSION III: PRODUCTION, HARVEST, FRUIT QUALITY AND MARKETING

These posters will be presented on June 14 from 10:15 – 10:23

(P14) Effects of Modified Atmosphere Packaging on in-shell stored fresh walnuts

Dr. Miltiadis Christopoulos (Hellenic Agricultural Organizatoin – Demeter, Greece)

SESSION IV: PLANT PRODUCTION, ORCHARD MANAGEMENT, DEFENSE

These posters will be presented on June 14 from 10:15 – 10:23

(P10) Pruning strategy depending on the variety (Franquette, Fernor, Lara)

Ms. Delphine SNEEDSE (SENURA, France)

(P11) Microbiome observations of fully-watered and deficit-watered micropropagated rootstock pecan trees

Dr. Kimberly Cervantes (New Mexico State University, USA)

(P12) Exploring the molecular basis of the scarlet pellicle trait in English walnut (Juglans regia 'Robert Livermore')

Noah G. Feinberg (University of California, USA)

(P13) Fruit effect of exogenous application of calcium chloride in Chandler commercial walnut orchards

Assist. Prof. Helen Kalorizou (University of Patras, Greece)

(P13b) Carbon partitioning in a walnut-maize agroforestry system through arbuscular mycorrhizal fungi

Durney Célien, Diederik van Tuinen, Eloïse Tranchand, François Hirissou, Daniel Wipf1, Pierre-Emmanuel Courty (Agroécologie, INRAE, Institut Agro, Univ. Bourgogne Franche-Comté, France)

(P13c) Walnut rootstocks mycorrhization: when microorganisms help micro-propagated plants to adapt

Dr. Laurent Jouve, Marianne Sinquin, Dr. Céline Allewaert, Dr. Sharhiar Hessami, Thomas Brun (TARNAGAS, France)

Posters

SESSION V: PESTS AND DISEASES

These posters will be presented on June 15 from 09:29 - 09:35

- (P15)** **Fungal community associated with shoot blight and branch dieback of 'Pieral' Lara walnut variety**
Loredana Cretu G. Stelian (Romania)
- (P16)** **Anthracnose disease of walnut in California and its management**
Dr. Themis Michailides (University of California- Davis, USA)
- (P17)** **Efficacy of two nematode species against the Walnut husk fly**
Dr. Erick D.M. Campan (Université Paul Sabatier Toulouse, France)
- (P18)** **Walnut Husk Fly - Monitoring population dynamics and density with yellow sticky traps**
Dr. Anita Solar, Rok Veber (University of Ljubljana, Slovenia)
- (P19)** **First report of *Ilyonectria liriodendri* causing black foot of walnut in Chile**
Prof. Gabino Reginato (University of Chile, Chile)
- (P20)** **Project ParasiT: using egg parasitoids as biocontrol agents against walnut and chestnut lepidopteran pests**
Jean-Baptiste Philibert (SENURA, France)

PLAN SANTÉ-SÉCURITÉ AU TRAVAIL EN AGRICULTURE 2021

Un plan INNOVANT



Prévention de la dégradation de la santé des professionnels agricoles

Le travail comme source de développement, de recherche de sens et d'épanouissement



Deux types D' ACTIONS



INCONTOURNABLES
déployées sur tout le territoire

AMBITIONS

qui répondent à des besoins locaux et à des initiatives collectives



Trois orientations MAJEURES

Agir pour préserver la santé dans le travail



Risque chimique



Risques liés aux machines



Les chutes de hauteur



Les troubles musculosquelettiques et psychosociaux



Prévention de la désinsertion professionnelle

Accompagner les projets liés aux évolutions du monde agricole

Prévention primaire à la conception et l'aménagement des lieux de travail



Evolutions technologiques

Evolutions sociétales et environnementales



Co-construire ensemble les actions de prévention

Organismes de recherche

Élus MSA

Employeurs

Partenaires de la MSA

Salariés

Agriculteurs

Prévention du mal-être

Santé publique

À travers ce nouveau plan SST, la MSA s'engage à donner aux professionnels agricoles la capacité d'agir pour leur santé et la performance de leur entreprise.

Exhibitors & Sponsors

3MAGRI

138 route de Taninges
74100 Vétraz- Monthoux – France

Contact:

Julien Gratier
Tel: +33 (0)4 50 87 10 10
Email: jg@3magri74
Website: www.3m-agri.fr

Agri.Builders

20 cours Richard-Vitton
69003 Lyon – France

Contact:

Tel: +33 (0) 782323223
Website: <https://agri.builders>

AMB ROUSSET

281 impasse du Tilleul
38470 Beaulieu – France

Contact:

Renaud Rousset
Tel: +33 (0)4 76 36 73 73
Email: renaud@ambrousset.com
Website: www.amb-rousset.com/en/684

AMP Sprayers & Waatic

Passeig de la Crosa S/N
17185 Vilobí d'Onyar – Spain

Contact:

Jordi Miquel
Tel: +34 (0)6 47 66 93 78
Email: tecnic@ampsprayers.com
Website: www.ampsprayers.com/en/
www.waatic.com/fr

ATEM SAS / 3U VISION

12 rue du Rocher
49124 Saint Barthélémy d'Anjou - France

Contact:

Tel: +33 (0) 647608047
Email: christophe.moreau@atem-industrie.com
Website: www.atem-industrie.com

CA38, FDSEA 38, Agri Emploi 38

34 rue du Rocher de Lorzier
38430 Moirans - France

Contact:

Tel: +33 (0) 4 76 20 67 11
Email: ghislain.bouvet@isere.chambagri.fr
Website: www.extranet-isere.chambres-agriculture.fr

France Cabinet CA EAU

242 rue du Général de Gaulle
69530 Brignais – France

Contact:

Franck Falcou
Tel: +33 (0)4 78 50 60 45
Email: f.falcou@caeau.fr

CIMAN

Laval
19240 Allasac - France

Contact:

Tel: +33 (0)6 72 90 14 08
Email: poullain@ciman.fr
Website: www.sommier.biz

Exhibitors & Sponsors

COOPENOIX

75 avenue de la Noix de Grenoble
38470 Vinay – France

Contact:

Christine Bonnet
Tel: +33 (0)6 07 21 88 62
Email: c.bonnet@coopenoix.com
Website: www.coopenoix.com

Crédit Agricole Sud Rhône Alpes

38000 Grenoble – France

Contact:

Email: franck.julien@ca-sudrhonealpes.fr
Website: www.credit-agricole.fr/ca-sudrhonealpes/
agriculteur.html

EQUIP AGRI

281 impasse du Tilleul
38470 Beaulieu - France

Contact:

Tel: +33 (0)6 33 09 56 39
Email: bernard.lapierre@equipagri.net
Website: www.equipagri38.com

GROUPE OXYANE

42/44 rue du Onze Novembre
38217 Vienne – France

Contact:

Véronique Unternahrer
Tel: +33 (0)6 22 06 73 83
Email: v.unternahrer@groupe-oxyane.fr
Website: www.groupe-oxyane.fr

Groupe Payre

2089 route de St Quentin
38430 Moirans – France

Contact:

Mélanie Vernier
Tel: +33 (0)4 76 35 31 69
Email: communication@ets-payre.fr
Website: www.groupe-payre.fr

INTERNATIONAL PLANT SELECTION SARL

route de Marseille - BP 125
26100 Montelimar – France

Contact:

Gloria María Guerra Pérez
Tel: +33 (0)4 75 90 92 89
Email: iberica@ips-plant.com
Website: www.ips-plant.com/fr

LALLEMAND PLANT CARE

4 route de Beauûy
31180 Castelmaurou – France

Contact:

Tel: +33 (0)6 45 45 27 40
Website: www.lallemandplantcare.com/fr/france

MAF RODA AGROBOTIC

Impasse d'Athènes - ZAC ALABSUD II - CS 60112
82000 MONTAUBAN – France

Contact:

Tel: +33 (0)5 63 63 27 70
Email: maf@maf-france.com
Website: www.maf-roda.com/fr

Exhibitors & Sponsors

MAISON FRANCOIS CHOLAT

1310 route de Thuile
38510 Morestel – France

Contact:

Website: www.francois-cholat.fr

Monchiero & C. S.n.c.

Strada crociera burdina 40
Bra 12042 – Italy

Contact:

Tel: +39 (0) 0172458126
Email: info@monchiero.com
Website: www.monchiero.com/

NISÃO, LDA

Rua Santa Ana a Lapa 5
Andar 1
Lisboa 1200-732 – Portugal

Contact:

Tel: +351 213420742
Email: info@nisao.pt
Website: www.nisao.pt

NOIX DE GRENOBLE

385A Route de Saint-Marcellin
38160 Chatte – France

Contact:

Nathalie Gaillard CING
Tel: +33 (0)4 76 64 06 64
Email: coordination@noixdegrenoble.com
Website: www.aoc-noixdegrenoble.com

PEPINIERES NOGALNATURE

Carretera de Alange a Mérida s/n
Alange 06840 – Spain

Contact:

Tel: +34 616 035 866
Email: desarrollo@nogalnature.com
Website: www.nogalnature.com

PROTEC SRL SORTING EQUIPMENT

Via Nazionale Est 19
Collecchio 43044 – Italy

Contact:

Tel: +39 (0) 521800800
Email: info@protec-italy.com
Website: www.protec-italy.com

Rampa TP - Cheval TP - Tout en Vert

Quartier Mondy - BP 84
26302 Bourg-de-Péage Cedex – France

Contact:

Tel: +33 (0) 475020610
Email: communication@groupecheval.fr
Website: www.groupecheval.fr

Saint Marcellin Vercors Isère Communauté

7 rue du Colombier
38160 Saint-Marcellin – France

Contact:

Tel: +33 (0) 476388370
Email: contact@saintmarcellin-vercors-isere.fr
Website: www.saintmarcellin-vercors-isere.fr

Exhibitors & Sponsors

SAS PEPINIERES PAYRE

675 Route des Allavards
38470 l'Albenc – France

Contact:

Tel: +33 (0) 608676149
Email: contact@pepiniere-payre.fr
Website: www.pepiniere-payre.fr

SCEA Pépinières Mouraud

3201 route de Lacave
46200 Pinsac – France

Contact:

Philippe Mouraud
Tel: +33 (0) 608600047
Email: mouraud.philippe@wanadoo.fr
Website: www.mouraud.fr

SERVICE SST MSA

20 avenue des Chevaliers Tireurs
73000 Chambéry – France

Contact:

Website: www.alpesdunord.msa.fr/lfp/accueil

UNITEC S.p.A.

Via Provinciale Cotignola 20/9
48022 Lungo – Italy

Contact:

UNITEC S.p.A.
Tel: +39 (0) 5 45 28 88 84
Email: unitec@unitec-group.com
Website: www.unitec-group.com

List in alphabetical order



SIVAL

SALON INTERNATIONAL
DES TECHNIQUES DE PRODUCTIONS VÉGÉTALES

16 > 18 JANV.
2024

PARC DES EXPOSITIONS
ANGERS



L'AVENIR DES PRODUCTIONS FRUITS & LÉGUMES COMMENCE ICI



OFFRE

700

exposants
en matériels
& services

PROSPECTIVE

+ de 80

interventions

150

experts

INNOVATION

2

concours
de référence

1

offre ciblée
Agtech

INTERNATIONAL

56

nationalités
présentes

1

convention d'affaires
internationale



#SIVAL24



Parc des Expositions d'Angers - Route de Paris
49044 ANGERS Cedex - Tél. +33 (0)2 41 93 40 40
WWW.SIVAL-ANGERS.COM

Un événement



Avec le soutien de



Technical Visits

Friday 16 June 2023 – All Day

Departure from Alpexpo at 08:30 | Return to Alpexpo at 17:45

Travel by bus | Meals included

Programme



The Payre nurseries put at your disposal their experience in grafting most of the French varieties of walnut plants (Californian varieties, pollinating varieties, hybrids, INRA certified) but also in grafting the main species of wood walnut trees, many varieties of chestnut trees and deciduous forest plants.



Description: visit of an AMB Rousset walnut pre-packaging line and multiplication of plans.



Description: visit of the processing line, packaging of nuts.



In an old drying shed renovated in a resolutely contemporary way, the Grand Séchoir shares tales and legends about walnuts, the profession of walnut grower from yesterday to today, the heritage of walnut drying sheds or the uses of walnuts and walnut thanks to an attractive museography and varied collections.



Description: visit of the permanent exhibition and the exhibition "Talk to me about insects".

The lunch will be kindly sponsored by:

La Communauté de Communes Saint Marcellin Vercors Isère.



This is the core business of the SENURE: to conduct and set up experimentation programs to address the problems of the nut industry and to develop methods and techniques directly applicable by the nut growers.

Description: visit of varieties and cultivation trials.

The visit of the site is done on foot and represents a course of 1,8 km, on flat ground. Remember to wear comfortable, flat shoes. Depending on the weather, bring appropriate clothing (to protect you from the rain or the sun if necessary). Don't forget to bring your water bottle.

Social Events

WELCOME COCKTAIL

Monday 12 June

Alpexpo, 19:00-20:00

The welcome cocktail will take place at the symposium venue.

Included in the registration fee (except for one-day registrations).

GALA EVENING

Wednesday 14 June

Fort de la Bastille, 19:00 – 23:00

La Bastille is a military fort overlooking the city of Grenoble from 264 meters. Built during the first part of the 19th century and reaching an altitude of 476 meters on the last foothills of the Chartreuse Massif, it replaced a first fortification built at the end of the 16th century. Accessible by cable car, on foot or by car, the Bastille, which also gives its name to the hill, is the first tourist site in the Grenoble area. From there, participants will have an exceptional view of the city and the mountains.

The participants will go to the departure of the cable car with the tramway A from Alpexpo (about 30 minutes).

www.bastille-grenoble.fr

Optional: 100 €

The price includes the round trip by cable car

Kindly sponsored by:



General Information

The following information is provided to make your attendance at the Symposium in Grenoble as enjoyable as possible.

SYMPOSIUM VENUE

ALPEXPO is located in the south of the city, easily connected to the train station thanks to the direct link of tramway A. The city center can be reached in 20 minutes.

www.alpexpo.com

ALPEXPO

Avenue d'Innsbruck CS 52408
38100 Grenoble - France

LOCAL TRANSPORTATION

Tram

Line A, stop Pôle Sud – Alpexpo

To encourage the use of public transport, the organizing committee will give each participant a Business TAG card (valid for 5 days).

Request your pass at the registration desk upon arrival!

Bike

With its 320 km of cycle routes, Grenoble-Alpes Métropole gives you all the good reasons to prefer cycling! Consult the map of the cycle tracks, the rental points

www.veloplus-m.fr.com

REGISTRATION AND INFORMATION DESK

The registration desk will be located on the ground floor of the Alpexpo Congress Center and will operate during the below times:

Monday 12 June

Welcome desk	14:00 – 20:00
Exhibition	18:00 – 20:00
Welcome reception	19:00 – 20:00

Tuesday 13 June

Welcome desk	08:00 – 19:00
Conferences	08:45 – 17:15
Exhibition	09:00 – 18:00

Wednesday 14 June

Welcome desk	08:00 – 18:30
Conferences	08:45 – 17:20
Exhibition	09:00 – 18:00
Gala evening	19:00 – 23:00
(upon reservation only)	

Thursday 15 June

Welcome desk	08:00 – 17:30
Conferences	08:45 – 17:00
Exhibition	09:00 – 16:00

Friday 16 June

Technical visits	08:30 – 17:45
(upon reservation only)	

NAME BADGES

Each participant registered for the Symposium will receive a name badge upon arrival. This badge will be your official pass and must be worn to obtain entry to all sessions, exhibition, catering and events.

CATERING

All morning and afternoon coffee-breaks and buffet lunches will be served in the exhibition area.

CERTIFICATES OF ATTENDANCE

Certificates of Attendance will be sent via email after the Symposium.

General Information

SUSTAINABILITY

The organisers of the IXth International Walnut and Pecan Symposium are pleased to welcome you to Grenoble, winner of the title of European Green Capital 2022.

The organisers are committed to taking actions to minimize the negative impacts of the event:



Limit printing, choose a responsible ecological printer.



Waste management, implementation the 5R rule (Refuse, Reduce, Reuse, Recycle, Return to the Earth).



Fight against plastic and single-use items.



Responsible catering (local, fresh and seasonal products, vegetarian options).



Fight against food waste. Surpluses will be donated to local associations



Incentive of public transportation (a conference venue and related activities accessible by public transportation). A transportation pass will be offered to participants for the duration of the symposium.



Promotion of local partners, especially food producers. Efforts on accessibility: simultaneous translation, reception of disabled people, website accessibility.

You too can be an actor in this process during the event by implementing the following eco-gestures:



Travel responsibly by choosing low-carbon modes of transport: find out how much CO² you emit during your trip.



Carpool with other delegates using the congress platform.



Get around by public transport, bicycle or on foot. Use public transport thanks to the TAG network (5 tramlines and 18 bus lines).



Reduce and sort your waste.



Eat healthy, organic, local: look at the good addresses suggested by the organizing committee to discover typical restaurants and local producers.



Drink responsibly: bring your own water bottle or cup that you can use at the water fountains. They will be particularly useful during the technical visits and the excursions. (Water during breaks and lunches will be served in glass bottles or carafes).

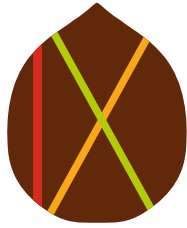


Reduce paper consumption.



Put your badge and its lanyard in the collection bins provided for this purpose before leaving the congress as they are reusable and reused.





IX International Symposium on

Walnut & Pecan

Grenoble, France 12–16 June 2023

Congress office

c/o K.I.T. Group France

Association & Conference Management

2-4 rue Joseph Sansboeuf

75008 Paris – France

General Information:

E-mail: contact@francenut2023.com

Sponsorship and Exhibition:

E-mail: partnership@francenut2023.com

Registration:

E-mail: registration@francenut2023.com

www.francenut2023.com