



# SEED ORCHARDS CONFERENCE

Brasov, Romania – 20 - 24 May 2024

## Monday, 20<sup>th</sup> May

Start	End		
8:30	13:00	Registration of the participants – Hotel Aro Palace, 1st floor	
13:00	14:00	Lunch, Hotel Aro Palace	
<b>CONFERENCE OPENING – EUROPA 2 ROM, 1<sup>st</sup> floor</b>			
14:00	15:00	<b>Chair</b>	Georgeta MIHAI - "Marin Dracea" INCDS – Head of the Silvobiology Laboratory
		<b>Officials</b>	Șerban DAVIDESCU - "Marin Dracea" INCDS – General Director
			Ioan Vasile ABRUDAN - "Transilvania" University of Brasov – Rector
			Alexandru Lucian CURTU - Faculty of Silviculture and Forest Engineering – Dean
			Codruț BĂLEA - National Forest Administration "Romsilva" – Technical Director
			Adrian CREȚU - Association of Forest Administrators – President
Tomáš Funda - IUFRO WP 2.09.01 - Seed Orchards – Coordinator			
15:00	15:30	<i>Coffee break</i>	
<b>SEED ORCHARD DESIGN</b>			
<b>Moderator:</b> Dr. Curt Almqvist, Skogforsk, Sweden			
15:30	15:55	<b>Keynote presentation:</b> Seed Orchards under Rolling-Front Landscape Breeding - <i>Milan Lstibůrek</i>	
15:55	16:20	Seed Orchard Evolution from Traditional Seed Production to Advanced Genetic Gains and Breeding Base - <i>Bailian Li and Steve Mckeand.</i>	
16:20	16:45	Expanding the Belgian Seed Orchard Network, a Collaboration between Private and Public Sector - <i>Hannes Wilms.</i>	
16:45	17:10	Ash in Distress: Results from a Large Experimental Field Trial on Ash Dieback in Austria - <i>Heino Konrad et al.</i>	
17:10	17:35	Challenges for a Seed Orchard Programme towards Seed Availability for Future Forest Composition in Saxony, Germany - <i>Jakob Quegner et al.</i>	
<b>Tuesday, 21<sup>st</sup> May</b>			
8:15	8:30	<i>Coffee break</i>	
<b>GENOMICS ANALYSIS</b>			
<b>Moderator:</b> Professor Dr. Yousry El-Kassaby, University of British Columbia, Canada			
8:30	8:55	<b>Keynote presentation:</b> DNA Sequence Data: Transition from Quantitative Genetics to Quantitative Genomics, <i>Yousry El-Kassaby</i> and <i>Eduardo Cappa.</i>	
8:55	9:20	A Genetic Database as a Tool to Provide Proof of Origin of Autochthonous Forest Reproductive Material, <i>Annelore De Ro.</i>	
9:20	9:45	Genomic Prediction and GWAS in Conifer: Foreseeable Challenges and Solutions, <i>Jian-Feng Mao.</i>	
<b>REPRODUCTIVE PHENOLOGY AND SEED PRODUCTION</b>			
<b>Moderator:</b> Professor Dr. Yousry El-Kassaby, University of British Columbia, Canada			
9:45	10:10	<b>Keynote presentation:</b> Reproductive Phenology, Genetic Diversity and Seed Production in Seed Orchards - <i>Erik Dahl Kjær</i>	
10:10	10:35	Transcriptome and Morpho-Physiological Analyses Reveal Factors Regulating Cone Bud Differentiation in Qinghai Spruce ( <i>Picea crassifolia</i> Kom.) - <i>Jumbui Wang and Tianqing Zhu.</i>	
10:35	11:00	<i>Coffee break</i>	
11:00	11:25	Phenotypic Plasticity of Selected Reproductive Traits of European Larch Clones on Seed Orchards - <i>Jan Kowalczyk et al.</i>	
<b>MATING PATTERNS &amp; GENE FLOW USING MOLECULAR MARKERS</b>			
<b>Moderator:</b> Professor Dr. Alexandru Lucian CURTU, "Transilvania" University of Brasov, Romania			
11:25	11:50	<b>Keynote presentation:</b> Understanding Mating Dynamics and Mitigating Pollen Contamination in Forest Tree Seed Orchards: Insights and Strategies - <i>Tomáš Funda</i> and <i>Irena Fundová.</i>	
11:50	12:15	Low Influence of External Pollen Sources in Swedish Norway Spruce Seed Orchards - <i>David Hall et al.</i>	
12:15	12:40	Ensuring Reliability and Quality of New Seed Orchards along the Track from the Breeding Population to Seed Lots in French Varieties of Loblolly Pine and Douglas Fir - <i>Luc Harvengt et al.</i>	
12:40	13:05	The Contribution of Individual Pollen Donors in a Hybrid Larch Orchard from Northern Germany - <i>Christoph A. Rieckmann.</i>	
13:05	14:00	Lunch, Hotel Aro Palace	

GENETIC GAIN & DIVERSITY OF SEED ORCHARDS CROPS		
<b>Moderator:</b> Professor Dr. Bailian Li, NC State University, USA		
14:00	14:25	<b>Keynote presentation:</b> Estimation of Genetic Gain and Gene Diversity of Seed Orchard Crops - <i>Kyu-Suk Kang</i> .
14:25	14:50	Evaluation of Genetic Diversity and Gain in Eucalyptus Camaldulensis Seed Orchards of Two Generations - <i>Mohan Varghese</i> .
14:50	15:15	How do Phenotypes of Seed Orchard (Improved) vs. Wild (Unimproved) Seedlings of <i>Pinus contorta</i> (lodgepole pine) Differ under Commercial Greenhouse Condition? - <i>Sarun Khadka</i> and <i>Barb Thomas</i> .
15:15	15:40	Variation of Strobili and Cone Productions in Clonal Seed Orchards of Anatolian Black Pine - <i>Nebi Bilir</i> et al.
15:40	16:05	Advanced-Generation Seed Orchards of European Silver Fir in Romania – Achievements and Perspective - <i>Georgeta Mihai</i> et al.
16:05	16:30	<i>Coffee break</i>
<b>Moderator:</b> Professor Dr. Kyu-Suk Kang, Seoul National University, Republic of Korea		
16:30	16:55	A Low Input-High Selection Intensity-Approach for Rapid Development of Ash Trees with High Tolerance towards Ash Dieback Based on Breeding Seed Orchards (BSOs) - <i>Erik Dahl Kjar</i> et al.
16:55	17:20	Enhancing Genetic Improvement Clonal Seed Orchards of <i>Pinus densiflora</i> through Fertility-Based Clone Selection - <i>Ko Eun Jeon</i> et al.
17:20	17:45	Genetic Diversity of Silver Fir and European Larch Seed Orchards in Romania - Support for Advanced Breeding Generations - <i>Maria Teodosiu</i> et al.
17:45	18:10	A Novel Allelic-Based Stochastic Simulation Modeling for Seed Orchard Development - <i>Christi Sagariya</i> and <i>Lstiburek Milan</i> .
18:10	18:35	Genetic Parameters and Genetic Gains from Half-Sib and Full-Sib Progenies of <i>Larix Decidua</i> (Mill) Seed Orchards in Romania - <i>Alin Madalin Alexandru</i> et al.
19:00	<b>CONFERENCE DINNER, Hotel Aro Palace</b>	
<b>Wednesday, 22<sup>nd</sup> May</b>		
8:30	18:30	Field trip to a Silver fir seed orchard, a Norway spruce provenance trial and a Silver fir genetic resource. The lunch will be at a traditional guesthouse, in the Porumbacu – Arpasul de Sus area.
<b>Thursday, 23<sup>rd</sup> May</b>		
<b>EFFECT OF MANAGEMENT ON CONE PRODUCTION</b>		
8:15	8:30	<i>Coffee break</i>
<b>Moderator:</b> Dr. Luc E. Pâques, INRAE, France		
8:30	8:55	<b>Keynote presentation:</b> Management of the Fourth-Cycle Seed Orchard in Chinese Fir - <b>Liming Bian</b> et al.
8:55	9:20	High Stand Density Improves Seed Production in Seed Orchards of The Masting Species <i>Picea abies</i> - <i>Curt Almqvist</i> .
9:20	9:45	Conifer Seed Orchards in the US Pacific Northwest, <i>Keith Jayawickrama</i> and <i>Mike Crawford</i> .
9:45	10:10	Site Variation in Coning and Nutrient Content in Danish Nordmann Fir Seed Orchards, <i>Ulrik Brauner Nielsen</i> .
10:10	10:35	Mass-Production of Hybrid Larch Forest Reproductive Material: Is Advanced-Generation Hybridisation Seed Orchards an Option? - <i>Luc E. Pâques</i>
10:35	11:00	<i>Coffee break</i>
11:00	11:30	<b>IUFRO Meeting WP 2.09.01</b>
11:00	13:00	<b>POSTER SESSION and Breakfast Club ForestValue2 (download flyer)</b>
13:00	14:00	Lunch, Hotel Aro Palace
14:30	18:00	Filed trip to Norway spruce and larch genetic resources, and a visit to the Bran Castle (Dracula's Castle).
<b>Friday, 24<sup>th</sup> May</b>		
8:15	8:30	<i>Coffee break</i>
<b>RELATIONSHIP OF THE SEED ORCHARDS WITH OTHER FOREST ISSUES</b>		
<b>Moderator:</b> Dr. Tomáš Funda, Swedish University of Agricultural Sciences, Sweden		
8:30	8:55	<b>Keynote presentation:</b> Unveiling the Spectrum: Analyzing Genetic Parameters of Hyperspectral Reflectance and Leaf Functional Traits in Replicated Clonal Seed Orchards with Annual Dynamics - <b>Jan Stejskal</b> et al.
8:55	9:20	Unveiling Nordmann Fir Susceptibility to Silver Fir Woolly Adelgid: Insights from Clone Seed Orchards - <i>Jing Xu</i> et al.
9:20	9:45	Scots Pine Seed Orchard Experiment Gives Indications of Pollen-Mediated Transgenerational Epigenetic Inheritance - <i>Markku Lehtinen</i> et al.
9:45	10:00	<i>Coffee break</i>
10:00	11:00	<b>CONCLUSIONS AND CLOSING CEREMONY</b>

**POSTER PRESENTATIONS**

<b>No.</b>	<b>Title</b>	<b>Authors</b>
1	Spring Phenology and Genetic Diversity of Pedunculate Oak in Movileni Seed Orchard	<i>Ana Maria Ungureanu et al.</i>
2	FORSEE: Seeds for Climate-Adapted Forests: New Strategies for Management of Seed Orchards, Seed Storage and Germination Testing	<i>Anton Aigner and Heino Konrad</i>
3	Development of a Non-Destructive Method for Assessing Species Purity in Euro-Mediterranean Firs	<i>Caroline Teyssier et al.</i>
4	Advancing Seed Orchard Design through Integrated Arrangement and Evaluation Models	<i>Changyoung Oh et al.</i>
5	Seed Orchards Are Key to Increasing Resources for the Future	<i>Dag Lindgren</i>
6	The First Grayish Oak Seed Orchard Established in Romania	<i>Emanuel Besliu et al.</i>
7	An Overview of Seed Orchards in Ireland	<i>Enda Coates</i>
8	Genetic Background of Early Flowering in <i>Betula Pendula</i> for the Successful Development of Efficient and Rapid Breeding	<i>Giovanni Bozza et al.</i>
9	Assembly and Analysis of Chloroplast Genome for DNA Marker Development in <i>Quercus Acutissima</i> 'Gumsura 1ho'	<i>Kyeong-Seong Cheon et al.</i>
10	The Newest Seed Orchard of <i>Picea Abies pendula</i> Form Established in Romania	<i>Marius Budeanu et al.</i>
11	Challenges for Implementing Assisted Migration into a Seed Orchard Programme in Saxony, Germany	<i>Matthias Meyer et al.</i>
12	Study of the Decline of Coniferous Fruiting in the Landes Massif	<i>Melanie Romanet et al.</i>
13	Flowering and Seed Production on 20-Year-Old Silver Birch Clone Seed Orchard in Central Poland	<i>Tomasz Wojda et al.</i>