

	International Society for Seed Science Conference, the 15th Biennial ISSS Conference / Seed Ecology VIII MONDAY 15 September 2025 - FRIDAY 19 September 2025 Frasers, Kings Park Perth	
	Monday, 15 September 2025	
	State Reception Centre	Function Centre Room 1
07:30	Registration	
09:00	Welcome to Country	
09:30	Opening Ceremony	
10:30	Morning Tea	
11:00	ISSS Derek Bewley Career Lecture	
11:00	From field observations of seed behaviour to the regulation of dormancy cycling and germination at a molecular level Prof William Finch-Savage	
12:00	Lunch	
13:00	Keynote Presentation	Lunch
13:00	Seed maturation: epigenetic regulation of desiccation tolerance and longevity Dr Jérôme Verdier	
13:30	Seed Developmental Biology 1	
13:30	An exploration of light harvesting and bioenergetics in developing seeds Dr Guy Hanke	Stemona Tuberosa Genome Reveals Mechanisms Underlying Seed Dispersal By Differentiating The Fatty Acids Composition In Its Seed And Its Appendage Dr Tianquan Yang
13:45	Identification of a photosynthetic protein of specific importance in seed development. Dr Melvin Rodriguez-Heredia	Biomass allocations in wind-dispersed diaspores Dr Lu Zong
14:00	Genetic insights into seed production traits in parsnip (<i>Pastinaca sativa</i>) Dr Sofia Kourmpetli	Seed traits and Surface Roughness: A Wind Tunnel Study on Seed Wind Dispersal Ms Siqi Liu
14:15	TERMINAL FLOWER 1 (TFL1) regulates seed longevity independently of its role in seed size Prof Jose Gadea	Stability of a wild wheat population across ecological microhabitats over 36 years Dr Tal Dahan-Meir
14:30	Staying Alive Under Desiccation: A Fascinating Feature Of Seed: Role Of Pimt-hsf Module. Dr Manoj Majee	Big Heads, Small Populations: Seed set failure in long-lived perennial grassland herb <i>Ptilotus macrocephalus</i> Ms Susan Kachaniwsky
14:45	Afternoon Tea	Afternoon Tea
15:15	Seed Developmental Biology 2	
15:15	Volume Type Matters: Volumetric Characteristics of Seeds at Different Moisture Levels Dr Viktor Sydoruk	
15:30	Deciphering the effects and regulatory mechanisms of intercropping on seed yield based on high-throughput phenotyping technologies Dr Zhenfei Zhang	
15:45	Elevated grain moisture content during maturation drying increases the risk of pre-harvest sprouting in wheat. Mr Jeremy Curry	
16:00	Effects of Biostimulants in Commercial Pepper Seed Production Under Heat Stress Dr Gustavo Ramirez	
	Function Centre	
16:30	Welcome Reception	
18:00	End of Day 1	

	Tuesday, 16 September 2025		
	State Reception Centre	Function Centre Room 1	Biodiversity Conservation Centre
07:30			Western Australian Botanic Garden Tour
09:00	Keynote Presentation		
09:00	Adaptive Seed Bank Strategies in Cold Deserts of Central Asia: Dormancy, Heteromorphism, and Pre-Dispersal Germination Prof Juanjuan Lu		
09:30	Seed Dormancy and Germination 1	Seed Banks and Soil Seed Bank Dynamics 1	Workshop - Modeling seed longevity in R to fit the viability equation - Part 1
09:30	Organellar LEA proteins ensure seed longevity by aiding the remodelling of plastidial and mitochondrial protein complexes Mr Dennis Brandt	Smoke without fire? Mass seedling recruitment events of species with physiological dormancy in unburned areas after the 2019-2020 fires A/Prof Mark Ooi	Modeling seed longevity in R to fit the viability equation Dr Dustin Wolkis, Dr Fiona Hay
09:45	Single-cell spatiotemporal characterization of abscisic acid regulatory networks in seed dormancy acquisition Mr Paul Schouweiler	Impact of Fire on Soil Seed Bank of Subtropical Pine Forests of Uttarakhand Himalayas, India Dr Manisha Thapliyal	
10:00	Distinct molecular biomechanical mechanisms inhibit endosperm cell-wall weakening and seed germination at cold and warm non-optimal temperature Prof Gerhard Leubner	Enclosure and increased rainfall promote the early restoration of degraded desert steppe by modifying the composition of soil seed bank Dr Huayang Chen	
10:15	Investigation of ROS molecular markers for the study of oxidative signaling during seed germination Dr Maria Victoria Gomez Roldan	Seed enhancement technologies in South-west Western Australia restoration Dr Alison Ritchie	
10:30	Morning Tea	Morning Tea	Morning Tea
11:00	Seed Dormancy and Germination 2	Seed Banks and Soil Seed Bank Dynamics 2	Workshop - Modeling seed longevity in R to fit the viability equation - Part 2
11:00	Adaptive seed-size variation in Arabidopsis thaliana Dr Almudena Mollá Morales	understanding the role of the beta vulgaris seed microbiome in field conditions Mr Joseph King	Modeling seed longevity in R to fit the viability equation Dr Dustin Wolkis, Dr Fiona Hay
11:15	Ecological Genetic Effects of Seed Dormancy Genes on Seedbank Longevity and Microbiomes in Weedy Rice Dr Xing-You Gu	The relationship between dispersal and seed bank dynamics of polymorphic fruits in a desert annual species Heteracra szovitsii Ms Yalin Jiao	
11:30	The Arabidopsis seed microbiome: Populations from the wild to the greenhouse Ms Sasiwimon Siricharoen	Overcoming physiological seed dormancy and breeding for physical seed dormancy in temperate annual pasture legumes. Mr David Peck	
11:45	Determining the genetic basis of seed dormancy in rice and establishing the association between dormancy, maturation period, and seed longevity Dr Vilav Dunna	The intensification of agriculture could affect physical dormancy in legume seed thus reducing the sustainability of ley-farming Mr Robert Harrison	
12:00		Using population-based threshold models to describe dormancy alleviation and ecological niches for seed germination Dr Kent Bradford	
12:30	Lunch	Lunch	Lunch
13:30	ISSS Alfred Mayer Plenary Lecture Seed dormancy as a key domestication trait Prof Petr Smýkal		
14:00	Seed Dormancy and Germination 3		
14:00	Studying germination in Arabidopsis and barley using single cell transcriptomics Prof Mathew Lewsey		
14:15	Unravelling molecular mechanisms of soybean germination under cold stress Miss Julie Legrix		
14:30	Role and mechanisms of selective translation in the regulation of Arabidopsis seed dormancy Prof Christophe Bailly		
14:45	MYB8 mediates GA signal to determine the heat requirement of seedling emergence in Chinese cork oak (Quercus variabilis) Dr Qinsong Yang		
15:00	Afternoon Tea	Afternoon Tea	Afternoon Tea
15:30		Exhibition Hall	
16:15	BGPA Board Room	Poster Session	
16:30	ISSS AGM		Early Career Sundowner
17:30			
19:30		End of Day 2	

	Wednesday, 17 September 2025
	Field trips
08:00	Field trips
17:00	
17:30	End of Day 3

	Thursday, 18 September 2025		
	State Reception Centre	Function Centre Room 1	Biodiversity Conservation Centre
08:00	Keynote Presentation Nondeep physiological dormancy can profoundly impact germination phenology in a warming climate Dr Patricia Gran		
08:00	Dr Roberta Dayrell		
08:30	Seed Dormancy and Germination 4	Seed Dormancy and Germination 5	Workshop - Accelerating and Broadening Seed Conservation Training
08:30	Deciphering a surprising twist during seed storage: induction of secondary dormancy Dr Olivier Leprince	Thriving in the harsh: salt and temperature tolerance in <i>Chenopodium quinoa</i> Mr Xiangyu Yu	Accelerating And Broadening Seed Conservation Training To Face The Global Biodiversity Crisis Dr Hanna Oldfield, Mrs Charlotte Lawrence
08:45	Unravelling the dynamics of seed stored mRNAs during seed priming Dr Patricia Gran	Arctic seed germination in a warming climate Miss Louise Winther	
09:00	Integrative Hormone Metabolomics and Transcriptomics Reveal Molecular Mechanisms of Dormancy Release during Cold Stratification in <i>Ferula sinkiangensis</i> Seeds Dr Meng Jiang	Viola seed biology and ecology: insights and oddities Dr Gemma Hoyle	
09:15	Role of environmental cues in the regulation of germination in two Cardamine (Brassicaceae) invasive species Dr Giuseppe Diego Puglia	Arctic Seeds Show Greater Resilience To Wildfires Than Expected Miss Margherita Tognola	
09:30	Exploring the genetics of seed dormancy and pod dehiscence in pea Ms Jacqueline Vander Schoor	Ecophysiology of seed dormancy and germination of <i>Hibbertia</i> to inform seed propagation for ecological restoration Ms Savuti Henningsen	
09:45	Comparative efficiency of desiccant solar bubble drying and sun drying techniques and subsequent quality of maize and rice seed Dr Muhammad Amir Bakhtavar	Challenges and solutions in germinating interspecific hybrid seeds and rare Australian Native species Dr Praful Umaretiya	
10:00	Predicting Seed Viability Based on Spectral Analysis - A Preliminary Report on Soybean Dr Olaniyi Ajewole Oyatomi	Deciphering seed dormancy, germination and storage requirements for conservation of <i>Zeria</i> Dr Ganesha Liyanage	
10:15		Enhancing germination and breaking dormancy of <i>Fagraea gracilipes</i> seeds through seed pre-treatment Mr Maika Daveta	
10:30	Morning Tea	Morning Tea	Morning Tea
11:00	Seed Dormancy and Germination 6	Seed Dormancy and Germination 7	Workshop - Adaptable Seed Behaviour Testing with Minimal Seed Use
11:00	Identifying and addressing global biases in seed ecology research Prof Sichong Chen	Investigating the effects of multiple stressors on dormancy breaking and germination of <i>Halophila</i> ovals seeds for future seed-based restoration techniques Ms Nina Ann Jin Ho	The Block Test: Adaptable Seed Behaviour Testing with Minimal Seed Use Dr Jan Sala
11:15	Seed traits underpinning threatened species ecology from rocky banded ironstone formations in Western Australia Dr Wolfgang Lewandrowski	Germination response of <i>Tsuga dumosa</i> (Himalayan Hemlock) seeds stored at varying storage temperatures and storage periods, to cold stratification and GA3 treatment Dr Manisha Thapliyal	
11:30	Characterizing the seed germination niche in Western Sydney to identify climate change risks and guide future seed-based restoration Mr Chaminda Bandara Alahakoon Alahakoon Arachchilage	Warm stratification widens the germination window in Mediterranean Rutaceae Dr Michael Just	
11:45	Enhanced seeds: when have they worked, when have they not, and do we know why? Dr Todd Erickson	Hiding in plain sight: the occurrence of seed desiccation sensitivity in the Mediterranean Southwest Australian Floristic Region. Dr Shane Turner	
12:00	Applied seed biology for the conservation and restoration of Western Australia's biodiverse flora Dr Emma Dalziel	How viable is cold-room seed storage for the direct developing seagrass <i>Posidonia australis</i> ? Ms Rachel Austin	
12:15	Interactions between seed functional traits and climate change in the Australian flora: implications for seed-based restoration Dr Fern Caro Beveridge	Seed X-ray imaging software for rapid native seed quality assessment Dr Simone Pedrini	
12:30	Lunch	Lunch	Lunch
13:30	Seed Dormancy and Germination 8	Seed Dormancy and Germination 9	Workshop - Improving the Seed Supply Chain
13:30	Defining the pyro-thermal niche: Do seed traits, ecosystem type and phylogeny influence thermal thresholds in seeds with physical dormancy? Dr Ryan Tangney	Seed traits, driven by climate factors, control epicotyl dormancy in Chinese cork oak (<i>Quercus variabilis</i>) Ms Gelu Ma	Native seed for ecological restoration: improving the seed supply chain with technology, training and community engagement Dr Simone Pedrini
13:45	Influences of fire-related fuel regimes on the seed ecology of 42 <i>Acacia</i> species across Australia Ms Sarah McInnes	The mystery of the dry after-ripening period in an endangered grass species, <i>Lachnagrostis adamsonii</i> Dr Hongxiang Zhang	
14:00	It's getting hot in here: effects of heat on germination and respiration in Australian native species Miss Tara Walker	Comparison of the seed dormancy and germination traits of 4 <i>Lysimachia</i> species, perennial herb native to the Korean Peninsula Mr Hyeon Min Kim	
14:15	Divergent germination responses to fire-related cues of <i>Suaeda glauca</i> dimorphic seeds under salinity stress Dr Hongyuan Ma, Dr Dandan Zhao	Ex-situ seed longevity and the germination niche of seeds from Western Australia's wet-dry tropics Ms Ebony Kitto	
14:30	Take my breath away: seed respiration responses to increased heat stress Ms Philippa Alvarez	Symbiotic germination ecology of <i>Gastrodia elata</i> , a holomycotrophic orchid Dr Xiao-Jian Hu	
14:45	Some like it hot: seed thermal threshold variation in obligate seeding <i>Acacia pulchella</i> along a climate gradient Ms Jessica Overton		
15:00	Afternoon Tea	Afternoon Tea	Afternoon Tea
15:30	ISSS Michael Black Founders Lecture - Tina Steinbrecher		
16:00			
16:15		Western Australian Botanic Garden Tour	
17:45			State Reception Centre
18:00			Conference Dinner
21:30	End of Day 4		

	Friday, 19 September 2025		
	State Reception Centre	Function Centre Room 1	Biodiversity Conservation Centre
08:00	Keynote Presentation		
08:00	Rainforest seed conservation – a decade of discovery Dr Karen Sommerville		
08:30	Seed Conservation and Gene Bank Management 1	Seeds and Society: Utilisation and Policy 1	
08:30	How moisture sorption hysteresis behaviour might influence seed storage responses Dr Fiona Hay	Research informing seed management for a large-scale rehabilitation program in the jarrah forest Dr Lucy Commander	
08:45	Identifying, characterizing and understanding short-lived tree seeds Dr Louise Colville	How to get the hard to get: can smoke and heat pre-treatment enhance the representation of three native forb species in a direct-seeded, urban wildflower meadow? Dr Katherine Horsfall	
09:00	A pivotal role of climate, genes related to developmental and oxidative stress in seed longevity in Salicaceae Dr Hongying Chen	Engineering seed-based restoration technologies to combat land degradation A/Prof Andrew Guzzomi	
09:15	Using RNA integrity to inform the curation of wild plant seeds in conservation seed banks Mrs Lauren Murfit	Seed-based seagrass restoration: Thermal priming of dehiscent Posidonia australis seed does not increase thermal tolerance in establishing seedlings Dr Elizabeth Sinclair	
09:30	Safeguarding Seed Longevity: Enhancing Efficiency in the Australian Grains Genebank Dr Katherine Baum	Can 20 year old stored seeds be used for plant translocation? An investigation in the arctic-alpine specialist Viscaria alpina Dr Fiona White	
09:45	Differential responses of seeds of wild Australian plant species under open versus hermetic rapid ageing conditions. Ms Rebecca Jonas	Rice encrusting with small-seeded native species for plant reintroduction in agroecosystems Dr Anna Corli	
10:00	Cryopreservation of short-lived species; Populus tremula and Salix caprea Dr Namrata Pradhan	Restoration of vegetation in the Gobi Desert: Establishment and utilization of a native plant propagation center Mrs Altantsetseg Balt	
10:15	Comparing ex-situ seed longevity for 62 South-eastern Australian temperate grassland species. Miss Candice Farrugia-Roberts	Barriers to seed recruitment differ between disjunct populations of a threatened crop wild relative in the southeastern United States Dr Jessamine Finch	
10:30	Morning Tea	Morning Tea	Morning Tea
11:00	Seed Conservation and Gene Bank Management 2	Seeds and Society: Utilisation and Policy 2	
11:00	Predicting potential seed longevity to assist scheduling of viability tests during storage Dr Kent Bradford	Driving Conservation Agriculture Principles in the Seed Sector of Rwanda and Lessons for East - Central Africa: The Role of the RICA Seed Center Dr Joseph Moughan	
11:15	Actions for the conservation of exceptional endangered plants in Europe: the example of the Botanical Garden of the University of Valencia Dr Daniel Ballesteros	Leveraging seed ecology for practical applications: Triticum vagans (Poaceae) as a potential cover crop in the Mediterranean Basin. Ms Micol Orenco	
11:30	Evaluation of a hyperspectral seed reflectance method for assessing seed viability and vigour in Amaranthus palmeri Mr Shaif Abakah	Conservation and Utilization of Crop Wild Relatives (CWR) in South Korea Mr Junhyeok Kim	
11:45	State of seed longevity research on traditional African vegetables Dr Sognigbe N'Danikou	Strengthening Breeding Pipelines and Seed Quality Assurance and Control in Dryland Crops Dr Chris Ojiewo	

12:00	Optimizing seed harvest and processing of wild lentil genetic resources entering active and base genebank collections. Mrs Rama Jawad	Seed access, market participation, and digital engagement in smallholder pigeonpea and groundnut farming in Malawi Dr Lilian Gichuru	
12:15		Assessment Of Behavioral Intelligence And Decisions On Adoption Of New Maize And Cowpea Seed Varieties Among Farmers In Bauchi State, Nigeria; Strategies For Accelerating Varietal Uptake Dr Rabiu Sani	
12:30	Lunch	Lunch	Lunch
	Friday, 19 September 2025		
	State Reception Centre	Function Centre Room 1	Biodiversity Conservation Centre
13:30	Seed Conservation and Gene Bank Management 3	Seeds and Society: Utilisation and Policy 3	
13:30	Millennium Seed Bank Partnership Seed Conservation Standards: 10 years of lessons learnt and implications for the future of seed bank management Dr Alice Hudson	Plasma and phenotyping technologies for improved seed quality for tree production Dr Louise Colville	
13:45	Data consistency and curation is key to maximise the value of conservation seed banks: learnings from the review of australia's 2000-2020 seed bank programs. Dr Catherine Offord	Advancing Seed Purity Testing: A Bioinformatics-Driven Approach for Genetic Integrity and Quality Control Dr Chris Ojiewo	
14:00	Breaking the boundaries of extinction: a novel approach to plant resurrection using seeds from herbarium specimens Dr Giulia Albani Rocchetti	Sowing for seed: designing urban wildflower meadows for seed harvesting Ms Sophia Bosfelds	
14:15	Solutions to Seedbank bottlenecks: what can we learn from diversity after twenty-five years in storage at the Millennium Seedbank? Ms Rachael Davies	Challenges in germinating pūriri (Vitex lucens) at scale: The New Zealand native "teak" Dr David Pessanha Siqueira	
14:30		Sustainable Native Seed Harvesting: Balancing Conservation and Commercial Use Mrs Tanya White	
14:45	Afternoon Tea	Afternoon Tea	Afternoon Tea
15:15	Closing Ceremony and Awards		
15:45			
16:30			Tour: Kings Park Science Laboratories, Seed Bank and Nursery Facilities
18:00	End of Day 5		