PSILPH 2026

12th International Symposium on Plant–Soil Interactions at Low pH

Global Challenges of Acid-Soil Agriculture for the Sustainable Future | 27–31 October 2026 | Gifu, Japan

MAIN PROGRAM

Time	Program / Presentation	Presenter / Chair	Venue
October 27th, Tuesday			
14:00-17:30	**Registration**		**Nagaragawa Convention Center 4F**
17:30-19:30	**Welcome Reception**		**Miyako Hotel 11F The Sky Banquet**
19:45	**Shuttle bus departs Miyako Hotel for Gifu Station**		
October 28th, Wednesday			
08:30	**Registration**		Nagaragawa Convention Center 4F
Opening Ceremony			
9:00-9:20	Welcoming remarks	Hirouki Koyama	Nagaragawa Convention Center 4F Large Conference Room
	Opening address	Jian Feng Ma	
Plenary Talk		Chairperson: Zed Rengel	
9:20-9:55	Nutrient Homeostasis in Plants Grown on Acid Soils	Jian Feng Ma	
9:55-10:25	**Coffee Break & Poster Viewing**		Nagaragawa Convention Center 5F International Conference Room
Session 1 Crop Responses and Adaptation to Acid Soil Constraints			
		Chairpersons: Zhi-Chang Chen and Sheng Huang	
10:25-10:50	**Keynote:** Engineering Magnesium Partitioning Enhances Seed Biofortification and Acid-Soil Resilience in Crops	Zhi-Chang Chen	Nagaragawa Convention Center 4F Large Conference Room
10:50-11:15	**Keynote:** Reducing Cadmium Accumulation in Rice Grain in Acidic Soils through Genome Editing	Sheng Huang	
11:15-11:30	Evaluation of Mungbean [Vigna radiata (L.) R. Wilczek] Germplasms for Tolerance to Excess Iron Stress	Asha Kumari	

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11:30-11:45	Study on the Alleviating Effects of Gypsum Application to Rhizotoxic Stressors in Acid Soil	Koffi Pacome Kouame	
11:45-12:00	Decoding Multi-Stress Responses of Rice to Low-pH Soil Constraints through Machine Learning	Aswini Kumar Patra	
12:00-12:10	**Photo Session**		
12:10-14:10	**Lunch & Poster Presentation (Odd Numbers)**		Nagaragawa Convention Center 5F International Conference Room
Plenary Talk		Chairperson: Jian Feng Ma	
14:10-14:45	Aluminum Ion Sensing and Its Regulatory Mechanisms in Plant Roots	Shao Jian Zheng	
Session 1 Crop Responses and Adaptation to Acid Soil Constraints, continued			
		Chairpersons: Zhi-Chang Chen and Sheng Huang	
14:45-15:00	The Impact of Soil Acidity And Barley Genotypes on the Success of Cobiofortification with Zinc and Selenium	Zdenko Lončarić	
15:00-15:15	Accelerating Barley Breeding for Acid Soil Tolerance through Integrated Genomic and Speed Breeding Approaches	Meixue Zhou	
15:15-15:45	**Coffee Break & Poster Viewing**		Nagaragawa Convention Center 5F; International Conference Room
Session 2 Mechanisms of Plant Adaptation to Aluminum and Acid Soils			
		Chairpersons: Chao-Feng Huang and Toshihiro Watanabe	
15:45-16:10	**Keynote:** Aluminum Signaling and Coordination of External and Internal Aluminum Detoxification and Root Growth Responses	Chao-Feng Huang	
16:10-16:25	OsMGT4 Is Involved in Tolerance to Both Low pH and Al Toxicity in Rice	Min Ning	
16:25-16:40	Molecular Mechanism of Plasma Membrane H^+-ATPase Regulation for Aluminum Tolerance in Plants	Raj Kishan Agrahari	
16:40-16:55	Aluminum Hyperaccumulation and Its Potential Functional Role in the Cell Walls of a Lycophyte	Akinori Ren	
16:55-17:10	Oligogalacturonides as ROS-generated Damage Signals for WAK-mediated Al Tolerance in Pea	Min Yu	
17:10-17:25	Genetic Dissection and QTL Mapping of Aluminium Tolerance in Mungbean (Vigna radiata L.)	Dharmendra Singh	

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17:25-17:40	Boron Supply Alleviates Aluminum Toxicity-Restrained Polar Auxin Transport in Root Transition Zone	Lin Tao	
October 29th, Thursday			
08:30	**Registration**		Nagaragawa Convention Center 4F
Session 3 Mineral Nutrient Transport and Plant Adaptation to Acid Soils			
		Chairpersons: Junpei Takano and Naoki Yamaji	
9:00-9:25	**Keynote:** Boron Transport in Anthers Mediated Sequentially by BOR1 and BOR4 Borate Exporters Supports Pollen Grain Development in Arabidopsis	Junpei Takano	Nagaragawa Convention Center 4F Large Conference Room
9:25-9:40	The Mechanisms of STOP1 in Synergistically Enhancing Nitrate Uptake and Plant Adaptation to Acidity	Jia Yuan Ye	
9:40-9:55	WAKL4-mediated Phosphorylation of NRAMP1 Limits Cadmium Uptake in Arabidopsis	Jun Jie Yuan	
9:55-10:10	Novel Iron Efflux Transporters in Rice Required for Adaptation to Fluctuating Iron in Soil	Naoki Yamaji	
10:10-10:25	Identification of Critical Amino Acid Residues Required for the Polar Localization of a Rice Manganese Transporter	Noriyuki Konishi	
10:25-10:55	**Coffee Break & Poster Viewing**		
Session 4 Phosphate Nutrition and Plant Adaptation in Acid Soils			
		Chairpersons: Chuanzao Mao and Jun Wasaki	
10:55-11:20	**Keynote:** Molecular Mechanisms of Plant Adaptation to Low Phosphate	Chuanzao Mao	
11:20-11:35	RNA “Dark Matter”-Mediated Plant Adaptation to Low-Phosphate Stress	Zhiye Wang	
11:35-11:50	A Membrane-to-Nucleus Phosphate Signaling Cascade Drives Rapid Root Hair Elongation	Zhong Jie Ding	
11:50-12:05	Understanding The Low Phosphate Stress Responses in Mungbean	Lingaraj Sahoo	
12:05-12:20	Can Cluster Roots Help Us Grow Plants with Less Phosphorus Fertilizer?	Hirotsuna Yamada	
12:20-14:20	**Lunch & Poster Presentation (Even Numbers)**		Nagaragawa Convention Center 5F International Conference Room

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Plenary Talk		Chairperson: Shao Jian Zheng	
14:20-14:55	Sustainable Utilization of Acidic Soils: Chinese Innovations and Field Practices	Ren Fang Shen	
Session 5 Plant–Rhizosphere–Microbe Interactions in Acid Soils			
		Chairpersons: Tatsuhiro Ezawa and Ren Fang Shen	
14:55-15:20	**Keynote:** Acid-tolerant Arbuscular Mycorrhizal Fungi Provide an Alternative Pathway for Phosphorus Uptake via Accessing Inorganic and Organic Fractions	Tatsuhiro Ezawa	
15:20-15:35	Large Rhizosheaths on Wheat (Triticum aestivum) Enhance Root Growth, Diverse Bacterial Communities, and Grain Yield When Grown in Acidic Soil with a High Al^{3+} Content	Huyen T.T. Pham	
15:35-15:50	Fungal Assemblages Associated with Rice Brown Spot Lesions across Contrasting Edaphic Environments of Northern Sri Lanka: Insights from Culture-Independent and Culture-Dependent Approaches	Suvanthini Terensan	
15:50-16:05	Elevated CO_2 Modulates Rhizosphere Responses to Aluminium Toxicity in Contrasting Chickpea Genotypes	Neha Singh	
16:15-	**International Steering Committee Meeting/Leisure**		Nagaragawa Convention Center 4F; the adjoining room to the Large Conference Room
17:00	**Poster removal deadline**		
18:30-20:30	**Banquet**		**Miyako Hotel 2F Ballroom**
	Photo Session		
20:45	**Shuttle bus departs Miyako Hotel for Gifu Station**		
October 30th, Friday			
08:30	**Registration**		**Miyako Hotel 2F Room SAZANAMI**
Symposium: Understanding and Managing Acid Soils: From Global Acidification to Plant Adaptation			
		Chairpersons: Kazuyuki Inubushi and Hiroyuki Koyama	
9:00-9:25	Soil Acidification in the Anthropocene	Yakov Kuzyakov	Miyako Hotel 2F Room SAZANAMI

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9:25-9:50	Predicting pH in Highly-Weathered Soils Using Vis–NIR Spectroscopy and Auxiliary Soil Properties	Zeng-Yei Hseu	
9:50-10:15	Sustainable Management of Acid Soils in Tropical Agriculture	Tan Ngai Paing	
10:15-10:40	Molecular Understanding of Stress Response in Rice & Pulse Legume Growing in Acidic Agro-Ecosystems	Sanjib Kumar Panda	
10:40-11:10	**Coffee Break**		
11:10-11:40	Panel Discussion Panelists: Yakov Kuzyakov, Zeng-Yei Hseu, TAN Ngai Paing, Sanjib Kumar Panda, Lingaraj Sahoo, Kazuyuki Inubushi, and Hiroyuki Koyama		
11:40-12:40	**Lunch Break**		
Session 6 Formation, Chemical Characteristics of Acid soils and Response to Ecosystem			
		Chairpersons: Tomoyuki Makino and Kai-Wei Juang	
12:40-13:05	**Keynote:** Aluminium Solubility and Complexation with Organic Matter in an Acidic Upland Grassland Soil	Jim Moir	
13:05-13:20	Soil Acidification and Organic Carbon Accumulation during Postglacial Pedogenesis	Ekaterina Filimonenko	
13:20-13:35	Neutralization-Induced Colloidal Mobilization of Organo-Aluminum Associations in Strongly Acidified Allophanic Andosols under Tea Field Management	Haru Komatsu	
13:35-13:50	Sugarcane Bagasse Biochar for Amelioration of Flood-Affected Acid Tidal Swamp Soils: Effects on Soil Organic Carbon and Nutrient Availability	Rizal Ramadhan	
13:50-14:05	Plant Community Turnover along Soil Acidity and Permafrost Gradients in Mongolian Mountain Wetlands	Malgorzata Suska-Malawska	
14:05-14:35	**Coffee Break**		
Session 7 Microbial functions of Acid soils and Soil-Plant Interactions			
		Chairpersons: Kazumichi Fujii and Anil Somenahally	
14:35-15:00	**Keynote:** Biochemical Properties of Andosols Affecting C&N Dynamics	Kazuyuki Inubushi	
15:00-15:15	Acidification-Induced Fungal Activities Accelerate Soil Formation	Kazumichi Fujii	

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15:15-15:30	Freshwater Refugia and Cyanobacterial Mats in a Saline High-Mountain Desert: Contrasting Soil–Plant and Microbial Responses in the Eastern Pamir	Iwona Jasser	
15:30-15:45	Microbial Compatibility in Liquid Calcitic Lime for Low-pH Soils	Chin Chien Saw	
15:45-16:00	Plant-Microbe Interactions for Expanding the Effective Rhizosphere in Acid Soils: Perspectives from a Legume Study	Anil Somenahally	
16:00-16:15	Effects of Manure Application and Intercropping on Phosphorus Uptake and Rhizosphere Bacterial Communities in a Tropical Acid Soil	Junya Baba	
16:15-16:45	**Poster Award**		
	Closing Ceremony		
October 31st, Saturday			
Day Trip Excursion			
9:00	Depart JR Gifu Station		
9:20-9:30	Miyako Hotel Gifu Nagaragawa (pickup stop)		

POSTER PRESENTATIONS

Poster presentations are scheduled during the lunch sessions on **October 28 (odd-numbered posters) and October 29 (even-numbered posters)**. Poster viewing is also scheduled during the coffee breaks.

No.	Presenter	Presentation Title
P1	Antonela Markulj Kulundzic	Physiological Responses of Soybean to Foliar Potassium Iodate Application under Acidic Conditions
P2	MAYUR KIRITBHAI PATEL	Multilayered Regulation of Excess Fe and the Role of Ascorbate in Rice
P3	Chwan-Yang Hong	Harnessing Hormonal Reporter Lines to Decode Rice Responses to Acidic Soils
P4	Takayuki Sasaki	Studies of Protein Factors Interacting with a Wheat Malate Channel, TaALMT1
P5	Luping Gu	Responses of Pea to Photoperiod Under Different Boron Supply
P6	Chihiro Oda-Yamamizo	Functional Analysis of Key Enzymes in Hydrolyzable Tannin Biosynthesis Using Heterologous Gene Expression in Nicotiana benthamiana
P7	Toshihiro Watanabe	Aluminum-Accumulating Plant Melastoma Malabathricum Develops "Stones" in the Absence of Aluminum: Possible Growth Inhibition by Calcium Oxalate Deposition
P8	Ko Tahara	Multiple Aluminium-Detoxifying Hydrolyzable Tannins in the Highly Aluminum-Resistant Tree Eucalyptus camaldulensis
P9	Shin-ichiro Inoue	Identification of a Protein Kinase that Activates the Plasma Membrane Proton Pump Involved in Plant Acid Tolerance
P10	Tomomi Nitta	Aluminum Suppresses Iron Uptake-Related Genes to Alleviate Iron Toxicity in Melastoma malabathricum L.
P11	Yuji Suzuki	Too Much Rubisco is Disadvantageous for Photosynthesis and Plant Growth under Severe Phosphorus Deficiency
P12	Ivana Varga	Physiological Response of Domestic Hull-Less Oilseed Pumpkin Seedlings to Different pH Values of Water Solution
P13	Congxiao Wang	Natural Variation in Aluminum-Induced Malate Secretion: A Genome-Wide Association Study Linking to Soil pH Adaptation in Arabidopsis
P14	Dario Iljkić	Genetic Specificity of Microelement Uptake in Corn Across Different Soil pH
P15	Saki Nakano	Role of Phosphoenolpyruvate Carboxylase (PEPC) in Carboxylate Exudation from Cluster Roots of Phosphorus-Deficient White Lupin
P16	Hayato Maruyama	Physiological and Transcriptomic Insights into Sulfur-Mediated Aluminum Responses in Fimbristylis Dichotoma subsp. podocarpa
P17	Yuriko Kobayashi	Comparative Transcriptomic Analysis Reveals Diverse Mechanisms Underlying Aluminum Tolerance in Natural Arabidopsis thaliana Accessions

No.	Presenter	Presentation Title
P18	Tasuku Miyachi	Evolutionary Diversification of Al-Responsive Transcriptional Regulation across Green Plants: Functional Specialization of STOP1 Homologs in Marchantia polymorpha
P19	Anuradha Mahato	Aluminium Induced Alterations in Root Traits and Other Important Traits of Rice Seedlings under Acid Soil Stress Conditions
P20	Markkandan Ganesan	Evaluation of Agronomically Important Traits in Azolla Plants under Acidic Environmental Conditions
P21	Deepak Kumar	Physiological and Molecular Basis of Low-Boron Tolerance in Indian Mustard
P22	Qiu Yu Huang	Effect of Aluminum on Ascorbic Acid Secretion and Redox Balance in Root Systems
P23	Kai-Wei Juang	Poultry Litter-Based Biochar Used for Growing Zinc-Biofortified Sweet Potato in Acid Soil
P24	Katsuya Shiratori	Soil pH Management in Acidic Tea Fields Using Various Manure Composts Produced in Shizuoka Prefecture and a Sulfur Amendment
P25	Takuo Enomoto	Effect of the Application Ratio of Ammonium to Nitrate on Tea Plants under Acidic Conditions
P26	Haruto Sekine	Effects of Manure Application on Phosphorus Acquisition in Maize-Pigeon Pea Intercropping in Tropical Acidic Soil
P27	Amit Kumar	Crop Domestication and Improvement Alter Drought Legacy Effects on Barley Leaf Litter Decomposition without Changes in Soil pH
P28	Jun Wasaki	Strategies to Cope with Low-Phosphorus Conditions of Cluster-Root-Forming Species Naturally Grown in Nutrient-Poor And Weakly Acidic Soils in Western Japan
P29	Anurabh Chakravarty	Circular RNA? miRNA Sponge Interactions in the Rice Phosphate-Starvation Response
P30	Chong Wei Jin	Interaction between Fe and N in Plants: a Tale of Conflict
P31	XU Ji-Ming	Functional Analysis and Utilization of the Upstream Open Reading Frame (uORF) in the Rice OsPHO1;2 Gene
P32	Hirotaka Kokubo	Evaluation of Acidic soil Tolerance and QTL Analysis in Barley using pH Stress Field
P33	Yasufumi Kobayashi	Genetic Differentiation Underlying Salinity Adaptation of Quinoa: Toward Understanding Its Tolerance to Diverse Soil Conditions
P34	Anjarasoa Volatiana Razafiniary	Genetic Analysis of Low-Phosphorus Response in the Japanese Soybean Germplasm
P35	Joe Rene Manrique	Acid-Tolerant AM Fungi Are Distributed Globally across Wide Ranges of Soil pH
P36	Itsuki Kuriyama	Soil pH-Associated Microbial Community and Co-occurrence Network Structures in Acidic Tea Fields Across Japan

No.	Presenter	Presentation Title
P37	Yujie Song	Organic Fertilization Improves Soil-Microbe-Plant Interactions and Tea Quality in Acidic Soils
P38	Krunoslav Karalic	Model Assessment of Exchangeable Cations Availability in Limed Soils
P39	Zdenko Lončarić	Model for Assessing the Need for Liming and the Optimal Liming Material in Croatia
P40	YI JIE LIAO	Optimization and Evaluation of the Flotation-Sieving Method for Microplastic Extraction from Highly Weathered Soils
P41	Makoto Shibata	Silicate Amendment Builds up Soil-Available Silica and Improves Rice Grain Quality across Farmers' Paddies on a Leaching-Prone Alluvial Fan in Niigata, Japan
P42	Uta Kamemura	Physico-chemical Properties of Soil Profiles in Tea Gardens under Long-term No-Input and Fertilized Management: A Case Study in the Central Kinki Region, Western Japan
P43	Yuna Kawakami	Plant-Available Silica in Paddy Subsoil as an Index of The Field-Inherent Silica Supply: A Case Study on the Tainai River Alluvial Fan, Niigata Prefecture, Japan
P44	Ryota Hayashi	Thick Root Mats in Extremely Acidic Forest Soils Provide a Distinct Habitat for Soil Microarthropods
P45	Ruzica Lončarić	How Do Existing European Policies Support the Sustainable Management of Acidic Soils?
P46	Maheswari Dasgupta	Arabidopsis Root Transcriptional Landscape across Interacting Acid-Soil Stresses: Insights from Factorial Biclustering and Trajectory Networks
P47	Brigitta Tóth	Growth stage-dependent oxidative stress response of bread wheat under low soil pH conditions