

# Agriculture

## for a changing climate



**Mind-IL**  
שבוע המדע והאקדמיה של ישראל  
Israeli Science and Academia Week



**Monday, October 26, 2026**  
08:30–17:15



**Levinsky College of Education**  
15 Shoshana Persits St., Tel Aviv



AUDITORIUM



HALL C



LOBBY

08:30–09:00



Coffee, gathering & registration

LOBBY

09:00–09:45  
PLENARY

AUDITORIUM

### Opening session

Welcome · Keynote: Dan Yakir

09:45–11:15  
PARALLEL  
SESSIONS

AUDITORIUM

### Water, Carbon and Data: Farming in a Changing Climate

7 talks

HALL C

### Future Foods, Livestock Adaptation, Welfare and Biotechnology

7 talks · Invited: Yuval Cinnamon, Yulia Fridman

11:15–11:45



Coffee break

LOBBY

11:45–13:00  
PARALLEL  
SESSIONS

AUDITORIUM

### Plant Immunity, Pathogens and Microbiome

5 talks · Invited: Sima Yaron

HALL C

### Crop Diversity, Breeding, and Genome Engineering

4 talks · Invited: Ben Mansfeld

13:00–13:45



Lunch

LOBBY

13:45–14:30  
POSTERS

LOBBY

### Poster session

46 posters

14:30–16:00  
PARALLEL  
SESSIONS

AUDITORIUM

### Creative and Systematic Thinking for the Future of Sustainable Agriculture

6 talks · Invited: Ellen Graber

HALL C

### Growing under Pressure: Plant Development and Abiotic Stress Adaptation

6 talks · Invited: Nitzan Shabek

16:00–16:30



Coffee break

LOBBY

16:30–17:15  
PLENARY

AUDITORIUM

### Closing session

Keynote: Gidon Eshel · Prizes & closing remarks

#### AFTER THE CONFERENCE



17:30

### Departure to Tel Aviv University

By registration · [Register here](#)



18:15–21:00

### Mind-IL plenary event

Smolarz Auditorium, Tel Aviv University

Talks by Prof. Amnon Shashua and Prof. Eva Illouz, followed by a live performance by Shalom Hanoch.



REGISTER

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PLENARY

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### Opening session

**09:00** **Welcome & opening remarks**
**09:05** **Einat Zchori-Fein** ARO-Volcani

**09:10** **Yoram Kapulnik** BARD Executive Director

**09:15** **Dan Yakir** **KEYNOTE** WIS

Plants at the Drying Edge: Carbon, Water and Survival in a Changing Climate

09:45–11:15

 PARALLEL  
SESSIONS

AUDITORIUM

### Water, Carbon and Data: Farming in a Changing Climate

Chairs: Maya Engel (HUJI) &amp; Yotam Zait (HUJI)

**09:45** **Yigal Achmon** Guangdong Technion

Engineering the Soil Sustainabiome: Circular Solutions for Agriculture in a Changing Climate

**10:00** **Rafi Linker** Technion

Development of a Robotic System for Contact Measurement of Leaf Properties

**10:12** **Keren Yanuka-Golub**

 Kinneret Applied Research Institute  
 Intra- and Interspecific Native-Invasive Plant Competition under Warming Alters Soil Nitrogen Availability and CO<sub>2</sub> Production without N<sub>2</sub>O Accumulation

**10:24** **Or Sperling** ARO-Volcani

Offsetting Winter-Rainfall Variability with Annual Water Budgeting in Almond Orchards

**10:36** **Noam David** ARO-Volcani

Cellular Communication Networks as Rainfall Sensors for Agriculture

**10:48** **Anna Brook** U Haifa

Beyond Black-Box Models: A Physics-Guided Framework for Robust Agricultural Anomaly Detection and Species-Specific Weed Control

**11:00** **Maoz Dor** BGU

Microbial Carbon Use Efficiency Is Shaped by Soil Pore Architecture and Nitrogen Availability

HALL C

### Future Foods, Livestock Adaptation, Welfare and Biotechnology

Chairs: Sharon Elizur-Schlesinger (HUJI) &amp; Matan Golan (HUJI)

**09:45** **Yuval Cinnamon** **INVITED** ARO-Volcani

GOLDA: A Genetic Solution to End Male Chick Culling – Advancing Animal Welfare and Sustainability in the Global Egg Industry

**10:05** **Yulia Fridman** **INVITED** NewMoo

Milking the Meadow: Engineering a Cow-Free Dairy Aisle in the Field

**10:25** **Tom Cohen Ben-Arye**

 Chinese Academy of Sciences  
 Directed Evolution of Food-Grade Yeast for Sustainable Protein Production using Raman-Activated Cell Sorting

**10:35** **Orit Dashevsky** ARO-Volcani

Assessing the Ability of Bovine Mesenchymal Stem Cells to Grow on Okara-Based Scaffolds Derived from Soy Milk Waste

**10:45** **Adi Jonas-Levi** Tel-Hai U

Exploring Low-Input Autolysis for Generating Bioactive Peptides from Black Soldier Fly Proteins for Sustainable Aquafeeds

**10:55** **Nicolas Brukman** ARO-Volcani

Development of a Cell-Based Assay to Evaluate Bovine Sperm Function

**11:05** **Maya Ross** ARO-Volcani

Cooled Perches as an Adaptation Strategy for Heat-Stressed Laying Hens in Cage-Free Systems

11:15–11:45


**Coffee break**

LOBBY

11:45–13:00

PARALLEL  
SESSIONS

📍 AUDITORIUM

**Plant Immunity, Pathogens and Microbiome**

Chairs: Elhanan Tzipilevich (Tel-Hai U) &amp; Maggie Levy (HUJI)

- 11:45 Sima Yaron** **INVITED** Technion  
When Plant-Derived Antimicrobials Select Resistance: Evolution of Linalool Adaptation in Salmonella
- 12:05 Ido Rog** U Zurich  
Plant Breeding for Beneficial Mycorrhizal Associations
- 12:18 Jenia Binenbaum** TAU  
Chromatin Engineering to Prime Plant Pathogen Resistance by Synthetic H3K4me3 Deposition
- 12:31 Michal Breker Dekel** HUJI  
Evolutionarily Conserved Antagonistic Mechanisms of Soil Microbiota towards Arabidopsis thaliana and Chlamydomonas reinhardtii
- 12:44 David Ezra** ARO-Volcani  
Are Spring Heatwaves Driving the Sudden Emergence of Persimmon Corky Star Disease under Climate Change?

📍 HALL C

**Crop Diversity, Breeding, and Genome Engineering**

Chairs: Zvi Peleg (HUJI) &amp; Smadar Harpaz-Saad (HUJI)

- 11:45 Ben Mansfeld** **INVITED** WashU  
Wild Malus Pan-Genomics for Climate and Disease Resilience
- 12:05 Yael Lev-Merom** U Haifa  
Beyond the Bottleneck: Wild Diversity as a Living Resource for Crop Improvement
- 12:23 Erez Naim-Feil** Agriculture Victoria  
From Genome Editing to Farm Impact: Delivering Enhanced Digestibility Through Lignin Modification in Forages
- 12:41 Lior Rubinovich** Tel-Hai U  
Young Vegetative Quinoa: A Climate-Resilient Alternative Protein Crop for Mediterranean Agriculture

13:00–13:45



Lunch

📍 LOBBY

13:45–14:30

POSTERS

📍 LOBBY

**Poster session**

Chairs: Rotem Golan (ARO-Volcani) &amp; Shahar Baram (ARO-Volcani)

14:30–16:00

PARALLEL  
SESSIONS

📍 AUDITORIUM

**Creative and Systematic Thinking for the Future of Sustainable Agriculture**

Chairs: Yael Laor (ARO-Volcani) &amp; Roy Posmanik (Technion)

- 14:30 Ellen Graber** **INVITED** ARO-Volcani  
Agriculture for a Changing Environment: Cacao as a Thought Experiment
- 14:55 Yael Laor** ARO-Volcani  
Introducing the Living Lab for Regenerative Agriculture in the Northern Valleys of Israel
- 15:00 Gil Eshel**  
Soil Erosion Research Station, MoAg  
The Soil Challenge: Restoring Surface and Subsurface Soil Structure
- 15:15 Roi Ben-David** ARO-Volcani  
The Crop Rotation Challenge: Crop Diversification to Promote Sustainable Intensification
- 15:30 Maor Mazrafi** ARO-Volcani  
The Weed Management Challenge: From Reactive Control to Spatial and Systemic Management
- 15:45 Sivan Lachman** U Haifa  
The Making of a Systemic Intermediary: Lessons from an Israeli Emerging Agricultural Living Lab

📍 HALL C

**Growing under Pressure: Plant Development and Abiotic Stress Adaptation**

Chairs: Yael Hacham (Tel-Hai U) &amp; Gad Miller (BIU)

- 14:30 Nitzan Shabek** **INVITED** UC Davis  
Dynamic SCF E3 Ubiquitin Ligase Networks Rewire Plant Proteostasis During Abiotic and Immune Stress
- 14:55 Naomi Ori** HUJI  
Tuning Auxin Response for Yield Stability under Temperature Stress
- 15:08 Tal Dahan-Meir** Gregor Mendel Institute  
Adaptive Seed-Size Variation in Arabidopsis thaliana
- 15:21 Simon Michaeli** ARO-Volcani  
Ethylene-Producing Enzymes Moonlight as Functional Components of Autophagy under Energetic Deficiency
- 15:34 Zohar Meir** Gregor Mendel Institute  
Understanding Stem-Cell States and Their Dynamics in Plants
- 15:47 Yair Mau** HUJI  
Plant Responses to Heatwaves: The Importance of Internal Water Reserves

16:00–16:30

 Coffee break LOBBY

16:30–17:15

PLENARY

 AUDITORIUM

## Closing session

**16:30** **Gidon Eshel** **KEYNOTE** Bard College  
Can biotechnology turn beef carbon beneficial?

**17:00** **Prizes & closing remarks**

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## POSTERS

## Poster session

13:45–14:30

 LOBBY

46 posters

**Ofir Degani, PhD** Tel-Hai U

Combining Trichoderma Biocontrol with Clay-Based Slow-Release Azoxystrobin for Sustainable Management of Maize Late Wilt Disease

**Chris Mwangi Gathaiya** BGU

Nitrogen Form Shapes Plastisphere Microbiomes and Biodegradable Mulch Film Degradation

**Hadar Igla** HUJIGenerating Tobamovirus Resistance by Introducing Heterologous Immune Receptors into Tomato (*Solanum lycopersicum*)**Or Ganon** Technion

Changes with the Climate: Single Cell Analysis of Salmonella's Invasion to Plant Hosts Under Varying Temperatures

**Sivan Medina** HUJI

Characterization of the Interaction Network Between Plant Proteins and Tobamovirus Movement Proteins

**Stav Almog** HUJI

Bioavailability of Mineral-Associated Nutrients: Impact on Microbial Growth Dynamics

**Assaf Chen, PhD** Tel-Hai UAI-Enabled Detection of Invasive *Trianthema portulacastrum* for Precision Weed Management in a Changing Climate**Neta Kovetz** U Haifa

Crop Signaling Improves Pepper-Weed Classification under Reduced Spectral Resolution

**Yaeli Nevo** HUJI

Israeli Vineyard Growers' Perceptions of AI and Digital Agricultural Technologies

**Yahel Applbaum** U Haifa & MIGAL R&D

Comparing Adaptive Rotational and Continuous Grazing Using Remote Sensing Technologies and Real-Time Cattle Monitoring

**Rotem Golan, PhD** ARO-Volcani

Long-Term Agricultural Peat Stabilization and Degradation in a Hydrologically Managed Basin Under a Mediterranean Climate

**Eve Alungat Ochieng** Technion

Development of ARIMA Models for Predicting Agricultural Drought Using the Standardized Precipitation Evapotranspiration Index (SPEI)

**Noam Ouzana** Technion

A Simulation-Optimization Framework for Climate-Resilient Agricultural Planning at the Watershed Scale

**Faustine Kinisu** HUJI

Evaluating ISIMIP Crop Models for Climate Resilient Agriculture in Kenya

**Hanni Vigderovich, PhD** ARO-Volcani

Distinct Drivers of Carbon Dioxide and Methane Emissions from Urbanized Rivers and Canals in Northern England

**Adar Amir** Technion & ARO-VolcaniSmall Cracks, Large Emissions: Desiccation Cracks as N<sub>2</sub>O Hotspots in Agricultural Vertisols**Itamar Kaffman** Technion

Hydrothermal Carbonization for Climate-Resilient Agriculture: Turning Saline Digestate into a Functional Soil Amendment

**Hadar Buium** Technion

Cow Manure Digestate Treatment in Constructed Wetlands – Microbiome Composition Shifts and Engineering

**Nitzan Rainer** Technion

From Olive Waste to Resources: Coupling Hydrochar Production and Phenolic Recovery through Hydrothermal Carbonization

**Amit Zirman** ARO-Volcani

Engineering Bovine Stem Cells for Sustainable and Scalable Meat Production

**Dar Yaron** ARO-Volcani

Decoupling Meat from Livestock: TP53 Knockout Enables Serum-Free Expansion of Bovine Stem Cells for Scalable Cultured Meat

**Hadar Kaufer** ARO-Volcani

Closing the Loop with Lion's Mane: Towards Climate-Resilient and Circular Food Production

**Adi Jonas-Levi, PhD** Tel-Hai U

Exploring Low-Input Autolysis for Generating Bioactive Peptides from Black Soldier Fly Proteins for Sustainable Aquafeeds

**Ido Nir, PhD** ARO-Volcani

Old Dog, New Tricks: Diverse Mechanisms of Adaptive Flexibility in Stomatal Development

**Shahar Baram, PhD** ARO-Volcani

Nanobubble Technology Enhances Crop Yield and Stress Resilience Under Treated Wastewater Irrigation

**Yael Hacham, PhD** Tel-Hai U

Abiotic Stress Modulates Methionine Metabolism in Plants

**OrevaOghene Aliku, PhD** ARO-Volcani

Radiation Interception, Use Efficiency, and Plant Population Density as Drivers of Dry Matter Production Across Seven Crop Species: A Multi-Study Path Analysis

**Asha James** BIU

Night-Time Heat Stress Reveals a Stage-Specific Role for HY5 in Arabidopsis

**Gopika Shibu** Technion

Can Extreme Heat and High VPD Trigger Embolism in Well-Watered Grapevines?

**Vinitha Tandle** BIU

Transient Heat Stress Activates a Thermotolerant Dormant Pollen Reserve

**Spencer Johnswick** U Haifa

High-Frequency Pulsed Lighting Reduces Lighting Demand While Maintaining Lettuce and Tomato Productivity

**Shirley Munadimbwe** HUJI

Investigating the Effects of Elevated Carbon Dioxide Levels on the Nitrogen Assimilation Pathway in Wheat

**Asmaa Farhat-Hamado** U Haifa

How Does Altered Bundle-Sheath Development Affect Leaf Sodium Accumulation and Salt Tolerance in Tomato?

**Anuma Dangol, PhD** U Haifa

Phloem-Associated Sodium Recycling in Tomato Leaves under Salt Stress

**David Simanovich Zini** Better Seeds

Beyond Cargo Limits: Engineering Viral Delivery of Compact Genome Editors in Plants

**Ester Yeshayahou** Agrinetica LTD

Overcoming Transformation Barriers in Recalcitrant Crops: Genome Editing of Peanut (*Arachis hypogaea*) for Climate-Resilient Agriculture

**Tony Mamin** HUJI & ARO-Volcani

'Land of Barley': Restoration, Characterization, and Conservation of Lost Genetic Diversity of Barley Landraces from Israel and Adjacent Regions

**Boaz Lev-Yadun** ARO-Volcani

Comparative Field Evaluation of New Breeding Lines of Primum Hulled Wheat Under Mediterranean Climate

**David Kurbanov** ARO-Volcani

Advancing Virus-Induced Genome Editing in Pepper (*Capsicum annuum*) by Integrating Optimized Genetic Backgrounds and Novel Reporter Genes

**Tova Deutch-Traubman** ARO-Volcani

Advancing Climate Resilient Agricultural Research in Israel: The Research Center for Agriculture under Climate Change

**Roy Posmanik, PhD** Technion

Closing the Loop on Agricultural Waste: Implementing Circular Economy Principles at the Model Farm for Sustainable Agriculture

**Evyatar Asaf** HUJI

Integrating Sesame into Mediterranean Crop Rotations for Sustainable and Climate-Resilient Agriculture

**Elazar Volk** Technion & ARO-Volcani

Unravelling Salinity Feedbacks of Service Crop Hydrological Mechanisms: Mitigation-Accumulation Trade-offs in Semiarid Vertisols Under Climate-Driven Rain Regimes

**Neriya Perez Lapid** Technion

Optimizing UAV Herbicide Application for Effective Weed Control and Reduced Airborne Drift

**Tina Shabso** Tel-Hai U

Assessment of Agri-waste Mulching in Buffering Soil Temperature during Extreme Heat Events and Enhancing Carbon Sequestration and Soil Fertility

**Tuti Ninio** HUJI

Associations between Soil Taxonomy and the Distribution of Ground-Nesting Bees in Israel