

11th International Scientific Meeting EURASIAN SOIL CONGRESS 2025

International Congress on
"Innovations in Soil Science and Plant
Nutrition under Climate Change"

1 – 4 September 2025
Ondokuz Mayıs University, Samsun, TÜRKİYE

11th

PROGRAMME



**emiSS
Master**







International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (1 September 2025)

Hour	Blue Hall
09:00-10:30	Registration
10:30-12:00	WELCOME AND OPENING REMARKS
	Prof. Dr. Rıdvan KIZILKAYA , Chair of the Congress
	Prof. Dr. Coşkun GÜLSER , Coordinator of Erasmus Mundus Master in Soil Science (emiSS)
	Prof. Dr. Ayten NAMLI , President of the Soil Science Society of Turkey (SSST) and the Federation of Eurasian Soil Science Societies (FESSS)
	Prof. Dr. Garib MAMMADOV , President of the Azerbaijan Soil Science Society and Former President of FESSS
	Prof. Dr. Muharrem ÖZCAN , Dean of the Faculty of Agriculture, OMU
12:00-14:00	Halit DOĞAN , Mayor of Samsun Metropolitan Municipality
	Prof. Dr. Fatma AYDIN , Rector of Ondokuz Mayıs University (OMU)
12:00-14:00	Lunch
	Plenary Session: Invited Talks
14:00-14:30	Soil, water and agriculture in the global climate change and world situation change processes Svatopluk MATULA
14:30-15:00	Impact of long-term power station emissions on the distribution of priority polycyclic aromatic hydrocarbons in soil Svetlana SUSHKOVA
15:00-15:30	Pedogenetic conditions of the deriving soils in the Carpathian Mountains Tomasz ZALESKI
15:30-15:50	Tea/Coffee Break
	Chair : Markéta MIHÁLIKOVÁ
15:50-16:10	Development and pilot application of a plant test system for ecotoxicity assessment of metal-contaminated soils Andon VASSILEV
16:10-16:30	Evaluation of soil structural parameters with VESS scores Mert Can ARIKAN, Pelin ALABOZ
16:30-16:50	Prospects for the use of soil resources in the East Zangezur economic region of Azerbaijan in Agriculture Mahluga YUSIFOVA, Shams ALIZADE
16:50-17:10	Assessment of composed and non-composted rice straw incorporation on wheat (<i>Triticum Aestivum</i>) productivity and soil health Shova AKTER, Michelle MOLLEHUARA, Prabesh RAI, Abdurrahman AY, Rıdvan KIZILKAYA
17:10-17:30	Micropedological paradigms of profile-forming processes diagnosing in soils of Georgia Lia MATCHAVARIANI



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (2 September 2025)

HOUR	BLUE HALL	PINK HALL
	Chair: Svetlana SUSHKOVA	Chair: Tuğrul YAKUPOĞLU
09:30-09:50	Guaiacol peroxidase activity as a biochemical indicator of cold stress tolerance in Radish (<i>Raphanus sativus</i> L.) genotypes Gürkan BİLİR, Melek Nur ÖZDEMİR, Deniz EKİNCİ, Dilek KANDEMİR	Determination of the relationships between soil phosphorus forms and related enzymes and their spatial variations: A case study in Bartın hazelnut fields Ayşe ERTAŞ PEKER, Orhan DENGİZ, Betül BAYRAKLI
09:50-10:10	Dynamics in soil properties across different cropping systems in soils of Dadin Kowa, Gombe State, Nigeria Abdullahi SALEM, Umar SALEH, Idris Abubakar SANI	How does biochar affect soil fertility in clay soil? Salih DEMİRKAYA, Coşkun GÜLSER
10:10-10:30	Effect of elemental sulfur treatment to high lime and alkaline soils on available micronutrient elements (Fe, Zn and Mn) contents Serife Nur EKICI, Kadir SALTALI, Bedriye BİLİR, Ömer Faruk DEMİR	Effect of tomato compost application on some chemical properties of soils Murat DURMUŞ, Rıdvan KIZILKAYA
10:30-10:50	Boosting soil quality with fermented plant extracts Michelle MOLLEHUARA, Prabesh RAI, Shova AKTER, Abdurrahman AY, Rıdvan KIZILKAYA	Effects of conditioners applied to soils with different textures on some properties of soils Ö.Tebessüm KOP DURMUŞ, Nutullah ÖZDEMİR
10:50-11:10	Tea/Coffee Break	



International Congress on “Innovations in Soil Science and Plant Nutrition under Climate Change” 1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (2 September 2025)

Hour	Blue Hall	Pink Hall
	Chair: Svatopluk MATULA	Chair: Sezai DELİBACAK
11:10-11:30	Digital mapping of soil organic carbon using topographic and climatic variables Gafur GÖZÜKARA, Orhan DENGİZ	Relationships between soil physical, chemical and mechanical properties and bean (<i>Phaseolus vulgaris</i>) plants: A case study of Bursa Yenişehir, Türkiye Güzin ERGENOĞLU, Ali Rıza ONGUN
11:30-11:50	Identifying limitations and enhancement pathways for the WEPP Model in simulating rill erosion: A focus on parameter uncertainty and hydraulic drivers Selen DEVİREN SAYGIN	The effect of clinoptilolite on the movement of nickel heavy metal in soil and plants Ahmet Ege ÖZERCAN, Ali Rıza ONGUN
11:50-12:10	Enhancing soil classification resolution in Türkiye using AI-based modeling approaches Taha Yasin HATAY, Sümeyra Büşra HATAY, Bülent TURGUT	Comparison of different boron extraction methods Tan Işıl YAKUPOĞLU , Ali Rıza ONGUN
12:10-12:30	Calibration and temperature effect on accuracy of three selected soil moisture sensors Kamila BÁŤKOVÁ, Markéta MIHÁLIKOVÁ, Abdurrahman AY, Recep Serdar KARA, Elif ÖZTÜRK AY, Anılcan AYGUN, Petr DVOŘÁK	Temporal effect of diatomite on acidic and alkaline soils Gizem ÖZCAN, Ali Rıza ONGUN
12:30-14:00	Lunch	



International Congress on “Innovations in Soil Science and Plant Nutrition under Climate Change” 1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (2 September 2025)

HOUR	BLUE HALL	PINK HALL
	Chair: Andon VASSILEV	Chair: Pelin ALABOZ
14:00-14:20	Mapping of soil nutrients using GIS for nutrient management in hazelnut Sezen KULAÇ, Ferhat TÜRKMEN	The effect of cover crops on wet aggregate stability, dispersion ratio and organic matter of soil in <i>Nigella Sativa</i> L. Zeynep DEMİR, Ender Şahin ÇOLAK, Doğan IŞIK
14:20-14:40	Temporal changes in soil physical quality parameters from 2005 to 2020 in Tekkeköy, Samsun, Türkiye Aykut ÇAĞLAR, Orhan DENGİZ	Plant nutrient management for sustainable agriculture in semiarid climate conditions Fusun GÜLSER, Siyami KARACA, Bulut SARĞIN
14:40-15:00	Characterizing aeolian erosion risk of salt-affected soils from a degraded wetland area Sema KAPLAN	Investigation of the effects of different doses of ammonium sulfate, diammonium phosphate, urea and 15-15-15 NPK fertilizer applications on pH and nutrient elements in agricultural soils taken from different regions Yusuf Murat KEÇE, Adem GÜNEŞ
15:00-15:20	Effect of gypsum application on chemical and biological properties of a calcareous soil Abdurrahman AY, Rıdvan KIZILKAYA, Salih DEMİRKAYA, Coşkun GÜLSER	Calibration of soil analysis method for fertilization: For example organic matter Ayhan HORUZ
15:20-15:40	Tea/Coffee Break	



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (2 September 2025)

HOUR	BLUE HALL	PINK HALL
	Chair: Mahluga YUSIFOVA	Chair: Bülent TURGUT
15:40-16:00	Changes in nutrient availability and microbial activity in acidic soil treated with a microbial inoculant and alkaline amendments Prabesh RAI, Shova AKTER, Michelle MOLLEHUARA, Abdurrahman AY, Ridvan KIZILKAYA	The effect of lime application on soil reaction and available heavy metals Mehmet DÖNER, Ali Rıza ONGUN
16:00-16:20	Effects of manure and glyphosate applications on soil organic matter and microbial activities Murat GENCER, Mert ACAR, Taofeek Samuel WAHAB, Ali COŞKAN	Comparative study of multifunctional soil sensor with laboratory analysis Sevinc ALİYEVA, Ali Rıza ONGUN, Arif Behiç TEKİN
16:20-16:40	Evaluation of different carrier materials for the shelf life of <i>Bacillus megaterium</i> RK01 using GGE biplot analysis Betül BAYRAKLI, Erkan ÖZATA, Yusuf KOÇ, Emel KESİM	The effect of different diatomite doses on the leaching of phosphorus (P) and ammonium (NH₄⁺) from soil Zeynep Zerda ATAY, Ali Rıza ONGUN
16:40-17:00	The impact of climate change on tea cultivated soils Keziban YAZICI	The effect of foliar zinc application on yield component of corn plant Ayhan HORUZ, Güney AKINOĞLU
17:20-17:40	Using analytical hierarchy approach in determining landslide susceptibility - Imranlı example İrem ÇETİN, İkbâl TOPBAŞ, Fikret SAYGIN	The impact of inappropriate soil management on soil physical properties Coşkun GÜLSER, Füsün GÜLSER



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (4 September 2025)

Hour	Blue Hall
	Chair: Kamila BÁŤKOVÁ
09:30-09:50	Eco-friendly capsicum production using Bonacraft P24 biofertilizer Guguli DUMBADZE, Lasha MIKELADZE, Lali JGENTI, Nelson WAFULA, Rosa LORTKIPANIDZE, Nunu CHACHKHIANI-ANASASHVILI
09:50-10:10	Predicting soil degradation susceptibility using standard scoring functions and artificial neural networks: A case study in the Yukarı Engiz Basin, Türkiye Sena PACCİ, Orhan DENGİZ
10:10-10:30	<i>Tenebrio molitor</i> Frass: A multifaceted option for plant growth and biotic stress resistance in cucumber Zain Ul ABADIN, Lyubka KOLEVA-VALKOVA
10:30-10:50	The effects of raw phosphate and elemental sulfur applications on phosphorus availability in wheat Ömer Faruk DEMİR, Kadir SALTALI, Hüseyin DİKİCİ, Cafer Hakan YILMAZ, Halil AYTÖP, Murat ÇALIŞKAN
10:50-11:10	Tea/Coffee Break
	Chair: Sabit ERŞAHİN
11:10-11:30	Comparison of mineral and heavy metal contents in the soils of conventional and organic apple orchards in Erzincan Sevda YILDIRAN SÖĞÜRTLÜPİNAR, Adem GÜNEŞ
11:30-11:50	Minimal disturbance, maximum effect: Soil physical benefits of surface-applied compost Markéta MIHÁLIKOVÁ, Kamila BÁŤKOVÁ, Recep Serdar KARA, Cansu ALMAZ, Petr DVOŘÁK, Martin KRÁL
11:50-12:10	Effect of alkaline hydrolyzed sheep wool on growth and element concentrations of spinach plant (<i>Spinacia oleracea</i> L. cv) Selver KAN, Nuriye Sena EROĞLU, Aydın GÜNEŞ, Özge ŞAHİN
12:10-12:30	The effect of nitrogen and phosphorus enriched purified wood vinegar on soil enzymes and plant nutrition İlknur YURDAKUL, Selen BEDER, Atilla POLAT, Mahmut Reşat SOBA, Pınar SEVİM ELİBOL, Erdem ELİBOL, Tuna DEMİRCİ, Ayten NAMLI, Oğuz Can TURGAY, Muhittin Onur AKÇA, Ezgi KÜÇÜKEL
12:30-14:00	Lunch



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Oral Presentations (4 September 2025)

Hour	Blue Hall
	Chair: Lia MATCHAVARIANI
14:00-14:20	Response of soil organic carbon and nutrient stocks to future climate change under different land uses across Europe Baig Abdullah AL SHOUMIK, Md. Zulfikar KHAN, Coşkun GÜLSER
14:20-14:40	Effect of different waste-based protein hydrolysates on growth and mineral element concentrations of lettuce plant Mehmet Burak TASKIN
14:40-15:00	Soil fertility of tomato greenhouses in the Kaş Region of Antalya Ali Rıza ONGUN, Mahmut TEPECİK, Meleknaz ÖZAYDIN
15:00-15:20	Self-similarity in spatial variability of saturated hydraulic conductivity as affected by soil horizonation Seval KAVAKLIGIL, Sabit ERŞAHIN
15:20-15:40	Tea/Coffee Break
	Chair: Oğuz Can TURGAY
15:40-16:00	Effect of foliar phosphorus fertilizers on wheat development Havva TAŞKIN, Aydin GUNES
16:00-16:20	The response of soil biological properties irrigated with boiled potato water and <i>Saccharomyces Cerevisiae</i> application Murat GENCER, Mert ACAR, Taofeek Samuel WAHAB, Ali COŞKAN
16:20-16:40	Digital disaggregation of soil subgroups using DSMART in a Mediterranean landscape Yavuz Şahin TURGUT, Yakup Kenan KOCA
16:40-17:00	Impact of anthropogenic pressure on heavy metal pollution in urban park soils: A case study of Solvay Park in Krakow, Poland Michał GAŚIOREK, Hassan ESMAEILI GISAVANDANI, Abdelrahman TIEMA
17:00-17:20	Organization of effective soil management in the Gusar-Gonagkend cadastral district of Azerbaijan Sanam ISAYEVA
	Chair: Rıdvan KIZILKAYA, Coşkun GÜLSER, Orhan DENGİZ
17:20-17:50	CLOSING REMARKS AND DISCUSSION



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POSTER PRESENTATIONS

Enhanced rock weathering: A promising geoengineering strategy for atmospheric CO₂ removal and acid soil reclamation – Evidence from Indian Conditions

Chandra SAHA, Abir DEY, BB BASAK, Binoy SARKAR, Debarup DAS, Nintu MANDAL, Bijan MONDAL, MC MEENA

Sustainable agriculture with *Citrobacter freundii* AF-56: Reducing chemical footprint for a healthier environment

Afshan MAJEED

Bioencapsulation formulation of phosphate-solubilizing bacteria for enhancing phosphorus availability, growth, and yield of maize

Betty Natalie FITRIATIN, Nabila Syifa ARIANI, Pujawati SURYATMANA

Immediate and residual effect of biochar on selected soil properties of coarse-textured Ultisols and agronomic performance of maize

Chukwuebuka Vincent AZUKA, Oluebube Ann EKETTE

Estimation of soil temperature at different depths of soil profile

Coşkun GÜLSER, Orhan DENGİZ, Rıdvan KIZILKAYA, İmanverdi EKBERLİ

A new simplified method for estimating quantity-intensity parameters and plant availability of soil potassium through statistical tools

S.G. SAROWAR, Debarup DAS, Mandira BARMAN, Bappa DAS, Abir DEY, P.K. UPADHYAY, Debmalya SARKAR, K.K. RAO, Debrup GHOSH

The impact of microplastics on arable soil properties: A case study

Elmira SALJNIKOV, Tara GRUJIĆ, Marina JOVKOVIĆ, Aigul ZHAPPAROVA, Slobodan KRNJAJIĆ, Žaklina MARJANOVIĆ

Assessment of physicochemical properties of soils in the Kurdamir region of Azerbaijan and reclamation strategies

Vefa VERDIYEVA, Feride VERDIYEVA

Arbuscular mycorrhizal fungi inoculation modulates phosphorus uptake, nodulation activities and enhances the productivity of tropical soybean (*Glycine max* L.) in a derived Savannah

Muhammad Faheem ADIL, Shafaque SEHAR, Zhengxin MA, Khajista TAHIRA, Syed Muhammad Hassan ASKRI, Mohamed A. EL-SHEIKH, Aqeel AHMAD, Fanrui ZHOU, Ping ZHAO, Imran Haider SHAMSI

Insights into the alleviation of cadmium toxicity in rice by nano-zinc and *Serendipita indica*: Modulation of stress-responsive gene expression and antioxidant defense system activation

Muhammad Faheem ADIL, Shafaque SEHAR, Zhengxin MA, Khajista TAHIRA, Syed Muhammad Hassan ASKRI, Mohamed A. EL-SHEIKH, Aqeel AHMAD, Fanrui ZHOU, Ping ZHAO, Imran Haider SHAMSI

Congress Programme
Poster Presentations (1-4 September 2025)



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Congress Programme Poster Presentations (1-4 September 2025)

POSTER PRESENTATIONS

The effect of foliar fertilization on the yield of tomato plants in meadow-chernozem soils in Azerbaijan

Laman HUSEYNOVA, Aida MAMMADZADE, Gulsum MAMMADOVA, Tarana MANSIMZADE, Sama SAFAROVA, Rahila İSLAMZADE

The effect of different soil characteristics on catalase enzyme activities in alluvial lands

Rıdvan KIZILKAYA, Orhan DENGİZ, Coşkun GÜLSER

Pan-transcriptomic profiling demarcates Serendipita indica-Phosphorus mediated tolerance mechanisms in rice exposed to arsenic toxicity

Shafaque SEHAR, Muhammad Faheem ADIL, Syed Muhammad Hassan ASKRI, Qidong FENG, Dongming WEI, Falak Sehar SAHITO, Imran Haider SHAMSI

Remote sensing-based assessment of coastal erosion and geomorphological changes in a Caspian Delta

Tahira GAHRAMANOVA, Turkan MAMİSHOVA

Ecological problems and the impact of climate change in Shusha

Tunzala BABAYEVA, Rufat AZIZOV, Azada ALIYEVA

Optimizing foliar micronutrient application to improve sugar beet yield and quality in Southeastern Kazakhstan

Azamat KHIDIROV, Maksat BATYRBEEK, Karlyga RUSTEMOVA, Almagul MALIMBAYEVA

Management of pesticide-laden tomato residues in vermicomposting: Implications, limits, and safe application approaches

Fevziye Şüheda HEPŞEN TÜRKAY

Study of the soil cover structure of the Gobustan Massif

Fidan MANAFOVA, Gulnara ASLANOVA, Kozetta GASANOVA, Shukufa GURBANZADE

Changes in the lands of landscape complexes on the southern slope of the greater Caucasus in terms of ecotourism

Gulchohra HUSEYNOVA

Heavy metal content in the soils of the dried-up bottom of the Aral Sea

Tulkin ORTIKOV, Mansur MASHRABOV, Bobur SHONIYOZOV

The influence of soil salinity in the Shoulder irrigation area on autochthonous microorganisms

Anna VANKOVA, Mariya IBRAYEVA, Maria KONDRASHOVA, Dinara SHAUHAROVA

Integrated indicators of degradation of irrigated agricultural soils in Southeastern Kazakhstan

Raushan RAMAZANOVA, Mariya IBRAYEVA, Altinay SULEIMENOVA, Samat TANIRBERGENOV, Askar KURMANBAEV



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

POSTER PRESENTATIONS

The productivity potential of the lands of Nehram village in the Nakhchivan Autonomous Republic

Alovsat GULIYEV, Shalala SALIMOVA, Rahila ISLAMZADE, Tariverdi ISLAMZADE

Effect of cultivation factors on rice productivity elements in the Lankaran-Astara Region of Azerbaijan

Tariverdi İSLAMZADE, Şıxbaba POLADOV, Nilgün SELIMZADE, Ramina AHMEDOVA

Assessment of metal content and soil contamination indices in the vicinity of non-ferrous metal smelter (KCM-Plovdiv), Bulgaria

Violina ANGELOVA

The parametric evaluation approach for productivity index

Orhan DENGİZ, Coşkun GÜLSER, Rıdvan KIZILKAYA

Effect of Triacontanol (TRIA) applications on seed germination under salt stress conditions

Merve INANC, Adem GUNES

Yield response of wine grapes to fertilizer application and quality of wine

Ivan MANOLOV, Boyan STALEV, Anton YORDANOV

Effects of microplastics on soil properties and plant physiology

Sıla KELEŞ, Ali Rıza ONGUN

Land degradation in agricultural soils in Zile District, Tokat

Muhammet Emin SAFLI, Orhan DENGİZ

Soil erosion risk assessment of Sivas Zara district with Icona model

Ahmet KILIÇ, Baran Ali AYDIN, Birkan KILIÇ, Ömer DURAN, Fikret SAYGIN

Ecoethics Problems of Azerbaijan: Scientific, Legal, Moral Aspects

Garib MAMMADOV, Farid MUSTAFAYEV

Congress Programme
Poster Presentations (1-4 September 2025)



International Congress on "Innovations in Soil Science and Plant Nutrition under Climate Change"

1 – 4 September 2025 / Samsun, Türkiye

Transportation and Social Programme

TRANSPORTATION AND SOCIAL PROGRAMME

1 SEPTEMBER 2025

Presentations

09:00

Departure from OMTEL Hotel to AKM Congress Center by bus

18:00

Return from AKM Congress Center to OMTEL Hotel by bus

Welcome Dinner

19:30

Departure from OMTEL Hotel to Çok Amaçlı Salon by bus

22:00

Return from Çok Amaçlı Salon to OMTEL Hotel by bus

2 SEPTEMBER 2025

Presentations

09:00

Departure from OMTEL Hotel to AKM Congress Center by bus

18:00

Return from AKM Congress Center to OMTEL Hotel by bus

Congress Dinner

20:00

Dinner at OMTEL Hotel Restaurant

22:00

Fire & Tea Night by the seaside of OMTEL Hotel

3 SEPTEMBER 2025

City Tour

13:30

Departure from OMTEL Hotel to City Center by bus

4 SEPTEMBER 2025

Presentations

09:00

Departure from OMTEL Hotel to AKM Congress Center by bus

18:00

Return from AKM Congress Center to OMTEL Hotel by bus

Gala Dinner

19:30

Departure from OMTEL Hotel to Yelken Club by bus

23:30

Return from Yelken Club to OMTEL Hotel by bus



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Congress Notes



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1 – 4 September 2025 / Samsun, Türkiye

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