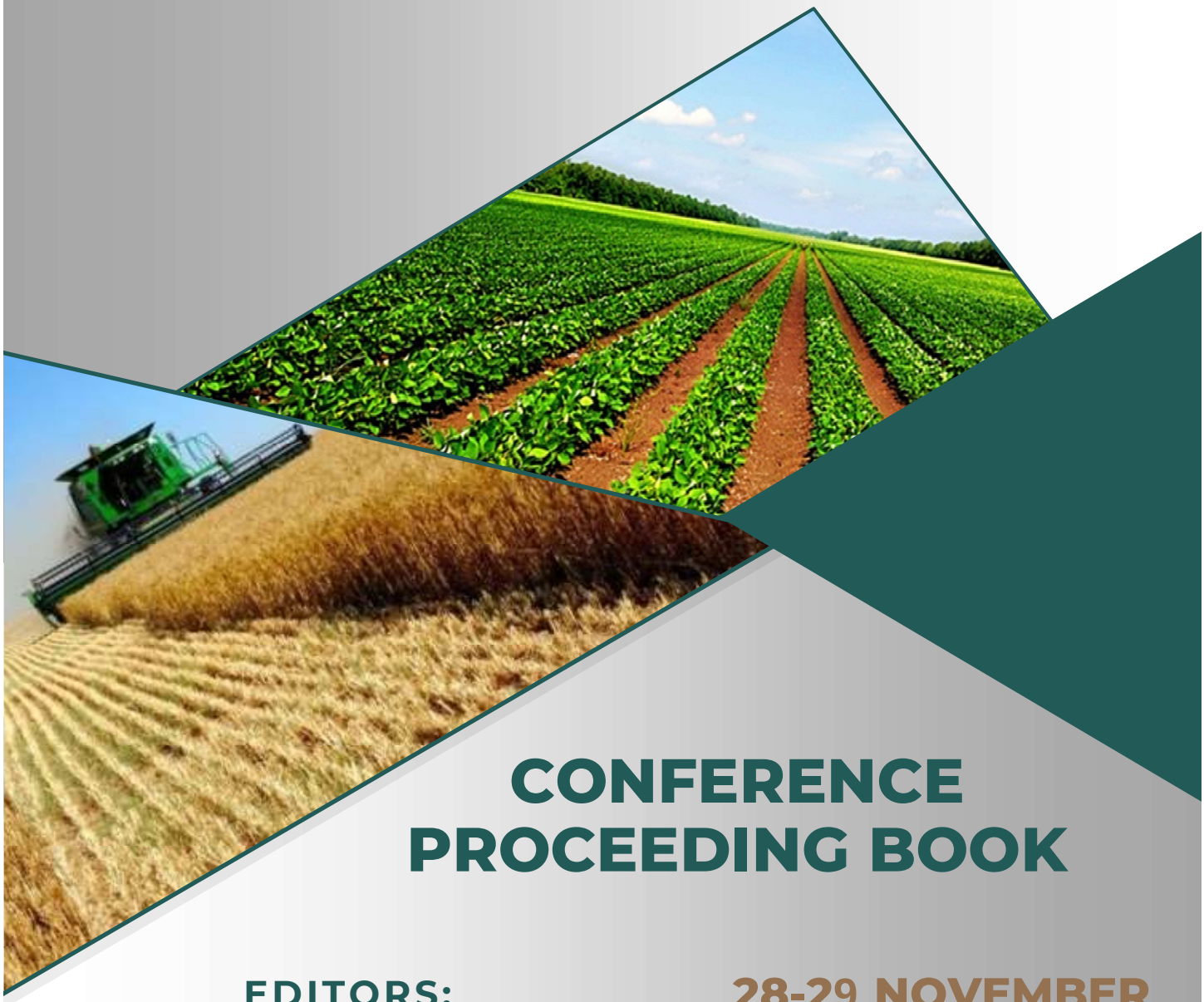
ISPEC 13. INTERNATIONAL CONFERENCE

ON AGRICULTURE, ANIMAL SCIENCE & RURAL DEVELOPMENT



CONFERENCE PROCEEDING BOOK

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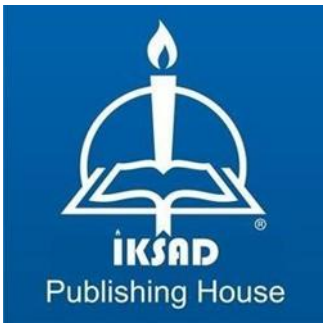
28-29 NOVEMBER

UŞAK

ISPEC INSTITUTE

T.C. UŞAK ÜNİVERSİTESİ 2006

13 th INTERNATIONAL CONFERENCE ON AGRICULTURE, ANIMAL SCIENCE AND RURAL DEVELOPMENT



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TÜRKİYE TR: +90 342 606 06 75 USA: +1 631 685 0 853

E mail: iksadyayinevi@gmail.com

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13 th INTERNATIONAL CONFERENCE ON
AGRICULTURE, ANIMAL SCIENCE AND RURAL DEVELOPMENT

13 th INTERNATIONAL CONFERENCE ON
AGRICULTURE, ANIMAL SCIENCE AND RURAL DEVELOPMENT

November 28-29, 2023 / Uşak, Türkiye

PROCEEDINGS BOOK
(Abstracts & Full Texts)

EDITORS

Doç. Dr. Ayşen Melda ÇOLAK
Assoc. Prof. Dr. Seyithan SEYDOŞOĞLU
Dr. Öğr. Üyesi Kerem MERTOĞLU

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13 th INTERNATIONAL CONFERENCE ON AGRICULTURE, ANIMAL SCIENCE AND RURAL DEVELOPMENT

EVALUATION PROCESS and POLICIES

All applications have undergone double blind peer review process. In addition, each paper was accepted and the process of publishing in the book was carried out through editorial oversight. The published papers were presented and discussed at the meeting.

Full texts and abstracts published in accordance with the Symposium Policy have been prepared in accordance with ethical rules and APA standards. Authors of all papers are both ethically and legally responsible.

PARTICIPANTS COUNTRIES

Türkiye, Algeria, Azerbaijan, Egypt, Ethiopia, Finland, Indonesia, India, Iran, Italy, Kazakhstan, Krgyzstan, Macedonia, Moldova, Morocco, Nigeria, Pakistan, Philippines, Russia, Romania, Ukraine, Uzbekistan

TOTAL ACCEPTED ARTICLES: 306

The Number of Accepted Papers from Türkiye: 145
The Number of Accepted Full Papers from Other Countries: 161
The Number of Total Papers:306

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13 th INTERNATIONAL CONFERENCE ON
AGRICULTURE, ANIMAL SCIENCE AND RURAL DEVELOPMENT

November 28-29, 2023

Uşak, Türkiye

SYMPOSIUM SCHEDULE

ISPEC

13. INTERNATIONAL CONFERENCE ON AGRICULTURE, ANIMAL SCIENCE & RURAL DEVELOPMENT

November 28-29, 2023 / Uşak, Türkiye



CONFERENCE PROGRAM

Online & In-person

PARTICIPATING COUNTRIES

Türkiye, Algeria, Azerbaijan, Egypt, Ethiopia, Finland, Indonesia, India, Iran, Italy, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Morocco, Nigeria, Pakistan, Philippines, Russia, Romania, Ukraine, Uzbekistan

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IMPORTANT

- To be able to make a meeting online, login via https://zoom.us/join site, enter ID instead of "Meeting ID or Personal link Name" and solidify the session.
- The presentation will have 15 minutes (including questions and answers).
- The Zoom application is free and no need to create an account.
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- The application works on tablets, phones and PCs.
- Speakers must be connected to the session 15 minutes before the presentation time.
- All congress participants can connect live and listen to all sessions.
- During the session, your camera should be turned on at least %70 of session period
- Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

TECHNICAL INFORMATION

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- You should be able to use screen sharing feature in Zoom.
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Before you login to Zoom indicate hall number and your surname (Hall-1, MELDA)

ÖNEMLİ

- Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildiriler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
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- Zoom uygulaması kaydolmadan kullanılabilir.
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- Sunum yapacakların sunum saatinden 15 dk önce oturuma bağlanmış olmaları gerekmektedir.
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- Oturumdaki sunumlardan ve bilimsel tartışmalardan (soru-cevap) oturum başkanları sorumludur.
- Sunumlar için 15 dakika (soru ve cevaplar dahil) süre ayrılmıştır.

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- Bilgisayarınızda çalışır durumda mikrofon bulunmalıdır.
- Zoom'da ekran paylaşma özelliği kullanılabilmelidir.
- Katılım belgeleri kongre sonunda tarafınıza pdf olarak gönderilecektir.
- Kongre programında yer ve saat değişikliği gibi talepler dikkate alınmayacaktır.

Zoom'a girişte sırayla salon numarasını ve soyadınızı yazınız (Salon-1, MELDA)

Opening Speech

Date: 28.11.2023
Ankara Time: 10.00-12.00

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Dean of The Faculty of Agriculture

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Governor of Uşak

28.11.2023

TUESDAY / 13.30-15.30

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center

Hall 1

MODERATOR: Prof. Dr. Nuray ŞAHINLER

AUTHOR	AFFILITION	ABSTRACT TITLE
Nuray Şahinler	*Uşak University*	Bee Product Composition and Use of Areas
Nuray Şahinler	*Uşak University*	Effect of Heating and Storage on Honey Quality Criteria
Nuray Şahinler Serkan Alakuş Beyza Çetin	*Uşak University*	Astrategic Product; Bee Venom and its Use in Apitherapy
Nuray Şahinler Hülya Gülbaş Elmali Raziye Özdin Büşra Uyar Nazlı Kayhan	*Uşak University*	Effects of Storage Period, Heating Temperature and Heating Duration on The Quality of Honey in Different Honey Types Produced in The Aegean Region.
Zeynep Nur Karakuş Gülşah Çalişkan Koç Yasemin Çelebi	*Uşak University*	Chokeberry: Nutrition Values and Potential Health Effects
Esra Bilici Salih Sezer	*Uşak University*	The Role of The S-Ribosylhomocysteine (Luxs) Gene in The Histophilus Somni Bacteria
Şeref Hamarat	*Padok Livestock and Agricultural Products Ltd.*	Cows, Artificial Meat and Global Warming
Erten Akbel Mustafa Kara	*Uşak University*	Extraction of *Silybum marianum* (L.) Gaertner (Milk Thistle)

28.11.2023
TUESDAY / 13.30-15.30

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center
Hall 2
MODERATOR: Assist. Prof. Dr. Sibel ALAPALA

AUTHOR	AFFILITION	ABSTRACT TITLE
Sibel Alapala Engin Kuldur	*Uşak University*	Sheep Breeding and Eşme Sheep in Uşak Province in Our Country
Sibel Alapala Engin Kuldur	*Uşak University*	Latest Situation of Pastures in Our Country and The Use of The Pastures By Sheep and Goats
Sibel Alapala Ömer Büyükyozgat	*Uşak University*	Breeding Studies in Cattle Breeding and Biotechnological Applications For Reproduction
Ömer Büyükyozgat Sibel Alapala	*Uşak University*	Simmental Cattle Breeding in Turkey and Its Importance in Meat Industry
Abidin Kemeç Ayşenur Altinay	*Uşak University*	Evaluating Urban Gardening Through Sustainable Development Goals From A Smart City Perspective
Ayşenur Altinay Abidin Kemeç	*Uşak University*	Examining The Role of Agricultural Activities in Rural Development From The Perspective of Sustainable Development Goals
Yasemin Sunucu Karafakıoğlu	*Uşak University*	A General Overview of Saffron
Betül Yücel Yeter Çilesiz	*Sivas University of Science and Technology*	Effect of Cooking Characteristics on Vitamin Content in Legumes
Hale Yıldız Yeter Çilesiz	*Sivas University of Science and Technology*	Evaluation of *Melissa officinalis* L. Plant in Terms of Antioxidant Properties

28.11.2023
TUESDAY / 13.30-15.30

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center
Hall 3
MODERATOR: Prof. Dr. Sezai ERCİŞLİ

AUTHOR	AFFILITION	ABSTRACT TITLE
Osman Yüksel Bekir Saka	*Uşak University*	Determination of Feed Values of Some Field Crop Wastes Used As Roughage Source
Burcu Begüm Kenanoğlu Havva Dinler Derya Maral Gül Rengin Eltem Cennet Büşra Aydın	*Uşak University*	Effect of Biopriming and Hidropriming Treatments on Tomato Seed Viability
Burcu Begüm Kenanoğlu Özlem Özmutlu Nazife Şakin	*Uşak University*	Effect of Allelochemicals on Germination and Emergence Quality of Dill and Celery Seeds
Müge Şahin Salih Gökkür Deniz Aksoy	*Aegean Agricultural Research Institute*	Preliminary Study on Determining The Self-Fertility Status of Some Japanese Plum Variety Candidates
Erdi Can Aytar Yasemin Özdener Kömpe	*Uşak University*	Seed and Protocorm Morphology of Serapias orientalis, and Aminoacid Analysis of Aeroear Parts
Alper Durmaz Erdi Can Aytar	*Uşak University*	The Use of Halophytic Plants in Saline Agricultural Areas and Their İmpact on Bioremediation in Such Environments.
Namuk Ergün Ismail Sayim Sinan Aydoğan Melih Bilir Gülden Çetin Özkan Emre Karahan	*Directorate of Field Crops Central Research Institute*	Grain Yield and Stability of Feed Barley (*Hordeum vulgare* L.) Genotypes Under Dry Conditions of Central Anatolia
Alper Durmaz Erdi Can Aytar	*Artvin Çoruh University*	Aristolochia bodamae Plant's Antioxidant Activity and Bioactive Compound Content

28.11.2023

TUESDAY / 16.00-18.00

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center

Hall 1

MODERATOR: Assist. Prof. Dr. Rahime CENGİZ

AUTHOR	AFFILITION	ABSTRACT TITLE
Kübra Özmen Kazım Mavi	*Hatay Mustafa Kemal University*	The Use of Nanomaterials in Vegetable Seed Treatments As An Innovative Approach in Sustainable Agriculture
Kübra Özmen Fulya Uzunoğlu Kazım Mavi	*Hatay Mustafa Kemal University*	Effects of Different Seed Treatments on Emergence Characteristics and Seedling Quality in *Solanum aethiopicum*
Hasibe Yildiz Ayşe Vildan Pepe Fatma Yildirim Bekir Şan	*Uşak University*	The Effect of Bap and Ga3 on in Vitro Seed Germination of White-Fleshed and Red-Fleshed Pitaya (*Hylocereus* spp.) Species
Zehra Yıldız Zakire Yücel Elanur Dursun Rahime Cengiz	*Sakarya Uygulamalı Bilimler University*	Determination of The Effect of Source Material on The Success of Obtaining Haploid in The in Vivo Maternal Haploid Technique
Müjgan Güney Servet Aras Murat Güney	*Yozgat Bozok University*	Potential of Jojoba in Agriculture: Addressing Cultivation Challenges and Turkey's Prospects
Müjgan Güney Gökçe Aydoner Çoban Hakan Keles	*Yozgat Bozok University*	Phytochemical Composition, Medicinal Properties, and Molecular Advances in Caper Bush
Hasibe Yildiz Kerem Mertoğlu	*Uşak University*	Evaluation Of Fruit Characteristics Together
Ilknur Eskimez Mehmet Polat	*Isparta Uygulamalı Bilimler University*	Volatile Oils in Ornamental Bulbous Plants and The Relationship Between Scent and Aesthetics
Ilknur Eskimez Mehmet Polat Abdullah Kankaya Kerem Mertoğlu	*Isparta Uygulamalı Bilimler University*	Adaptation of Stanley Plum Variety To The Ecological Conditions of Isparta

28.11.2023

TUESDAY / 16.00-18.00

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center

Hall 2

MODERATOR: Assoc. Prof. Dr. Mehmet ÖTEN

AUTHOR	AFFILITION	ABSTRACT TITLE
Murat Güney Servet Aras Müjgan Güney	*Yozgat Bozok University*	Almond Genome Sequencing – Past, Present, And Future
Murat Güney Hakan Keles Gökçe Aydoner Çoban	*Yozgat Bozok University*	Transcriptome and Genomic Analysis of Apple (*Malus* × *domestica*)
Servet Aras Müjgan Güney Gökçe Aydoner Çoban	*Yozgat Bozok University*	Use of Nitric Oxide in Horticulture
Servet Aras Müjgan Güney Hakan Keles	*Yozgat Bozok University*	Effects of Flood Stress on Fruit Species
Hossein Kazemı Mehmet Uğur Yıldırım Tuba Arjumend Mohammad Hadi Fatemi	*Uşak University*	A Framework for Assessment of biological Nitrogen Fixation (BNF) Services by Rhizobium in Agroecosystems (BNF-MEA Framework)
Ferzat Turan Gamze Nida Güneş Zeynep Duran Bilal Karakaya	*Sakarya Uygulamalı Bilimler University*	Effect Of Liquid Organic Fertilizer Used in Different Developmental Periods on Yield and Yield Parameters of Sunflower (*Helianthus annuus* L.)
Mehmet Öten Mertcan Koç Alperen Gümüş	*Sakarya Uygulamalı Bilimler University*	The Effects of Different Mixture Ratios Of Common Vetch + Triticale Grown in Sakarya Ecological Conditions on Green Forage Yield and Silage Quality
Mehmet Öten Melike Köse	*Sakarya Uygulamalı Bilimler University*	Determination The Effects of Different Additives Added To Vetch-Triticale Silage Mixture on Silage Quality
Abdulrezzak Memon	*Uşak University*	Role of Small GTP-Binding Proteins in Root Nodule Formation in The Model Legume *Medicago truncatula*
Enes Irat Merve Yeke Nuriye Merakli Abdulrezzak Memon	*Uşak University*	Evaluation of the potential use of duckweed for cleaning up leather industry wastewater pollution

28.11.2023
TUESDAY / 16.00-18.00

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center
Hall 3
MODERATOR: Assoc. Prof. Dr. Melekber SÜLÜŞOĞLU DURUL

AUTHOR	AFFILITION	ABSTRACT TITLE
Ebru Akyüz Çağdaş Okan Sarıtoprak Mehmet Polat	*Has Biotech Research Development Agriculture Industry and Trade A.Ş*	Effects of Plant Growth Regulators And Nutrient Medium on The Micropropagation of Garnem Rootstock
Gökçe Aydöner Çoban Müjgan Güney Murat Güney	*Yozgat Bozok University*	Currently Soilless Culture Systems in Vegetable Production
Gökçe Aydöner Çoban Servet Aras Hakan Keles	*Yozgat Bozok University*	The Effects of Lime Stress in Vegetables
Birsen Zeybek Zeliha Gökbayrak	*Tekirdağ Viticulture Research Institute*	Effects Of Plant Growth Regulators On Pollen Germination And Pollen Tube Development In Plum And Pears
Şehnaz Mertoğlu Cansu Karaca Gürsel Karaca	*Isparta Uygulamalı Bilimler University*	Use of Fungi in Sustainable Product Design
Melekber Sülüşoğlu Durul Mehmet Polat Hülya Ünver	*Kocaeli University*	The Importance of Mahaleb Cherry And Research on it
Birsen Geçioğlu Erincik	*Aydın Adnan Menderes University*	Importance of Vegetative Compatibility Groups of Cryphonectria Parasitica in Biological Control of Chestnut Blight
Nuriye Merakli Hüseyin Altundağ Abdulrezzak Memon	*Uşak University*	Chromium Tolerance, Bioaccumulation, and Localization in Different Varieties of *Brassica juncea*

28.11.2023
TUESDAY / 16.00-18.00

Uşak University, Recep Tayyip Erdoğan Congress and Culture Center
Hall 4
MODERATOR: Assoc. Prof. Dr. Ayşen Melda ÇOLAK

AUTHOR	AFFILITION	ABSTRACT TITLE
Fatma Alan Ayşen Melda Çolak	*Uşak University*	Pitaya (*Hylocereus* spp.) Importance of in Human Health
Fatma Alan Ayşen Melda Çolak	*Uşak University*	Pitaya (*Hylocereus* spp.) Flower Structure and Fertilization Biology
Kerem Mertoğlu	*Uşak University*	Aminoacids Variation According To Different Plant Organs in Cherry Cv. Starks Gold
Derya Öğüt Yavuz	*Uşak University*	The Effectiveness of Herbicides Oxyfluorfen and Pendimethalin in Controlling Redroot Pigweed (*Amaranthus retroflexus* L.) and Lamb's Quarters (*Chenopodium album* L.)
Ali Osman Lökçü Derya Öğüt Yavuz	*Uşak University*	Effects of Some Herbicides on Weed Species in Different Phenological Periods of Wheat
Havva Dinler Ercüment Osman Sarihan Mehmet Uğur Yildirim	*Uşak University*	Determination of The Vapor and Contact Effects of Sage (*Salvia Officinalis* L.) Oil Against Some Soil-Borne Pathogens of Strawberry in Vitro Conditions
Havva Dinler Derya Maral Gül Rengin Eltem	*Uşak University*	Antagonistic Effect of *Bacillus* Species Against *Fusarium* Wilt in Strawberry in Vitro Conditions
Kerem Mertoğlu	*Uşak University*	Hormone and Organic Acid Changes According To Different Plant Organs: An Example Of Cherry Cv. 0900 Ziraat
Ayşen Melda Çolak	*Uşak University*	Quince Wood Cuttings in Different Environments Rooting
Abdurrahman Özbek Aycan Özdemir Asuman Arslan Duru	*Uşak University*	The Effect of Urea Supplementation on Nutrient Contents and Some Fermentation Characteristics of Sugar Beet Leaves Silages
Sezai Ercişli	*Atatturk University*	Evaluation Of Fruit Genetic Resources
Sezai Ercişli	*Atatturk University*	Some Important Wild Edible Fruit Species Found In Flora Of Turkiye

28.11.2023

TUESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923

SESSION-1, HALL-1 / OTURUM-1, SALON-1

MODERATOR: Assoc. Prof. Dr. Bahar ATEŞ ÇAKIR

AUTHOR	AFFILITION	ABSTRACT TITLE
Cengiz Türkay Filiz Baysal Cenap Yilmaz	*Alata Horticultural Research Institute*	Breeding of Sari Ulak Olive Variety By Selection
Tahir Karaşahin	*Aksaray University*	Effect of Thyroid Hormones on Reproduction in Farm Animals
Tahir Karaşahin	*Aksaray University*	Poultry Availability and Evaluation of Turkey By Years
Aybike Bayraktar Ismet Boz	*Ondokuz Mayıs University*	Participation of Women in Household Decision-Making and Factors İnfluencing Their Choices: A Case Study Of Rural Communities in Samsun Province
Sedat Behrem Sabri Gül	*Aksaray University*	Some Environmental Factors Affecting The Medullated and Non-Medullated Fiber Diameter Characteristics in Central Anatolian Merino Sheep
Roza Yerezhepkyzy Aruzhan Zholmakhan Ayazhan Ibragim	*Kazakh National University*	Legal Support of Economic Methods of Environmental Law and Order Management in The Republic of Kazakhstan
T. I. Süleymanov S. I. Jafarova	*Baku City*	The Future of Marine Fuels in Azerbaijan: Aligning with IMO Climate Actions Through the Deployment of LNG, LPG, and Hydrogen
Maliha Gohar	*Kohat University of Science and Technology*	Classification of Second Order Ordinary Differential Equations Using Lambda Symmetries
Yusuf, Aisha Bilyaminu	*Hassan Usman Katsina Polytechnic*	Incidence of Diabetes Mellitus in Patients (25 Years Above) At Genegal Hospital Katsina State, Nigeria From January to June 2020
Iftikhar Yasin	*The University of Lahore*	Assessing Sustainable Growth: ICT and Natural Resource Rent Impact on Environmental Eminence in BRICS Nations

28.11.2023

TUESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923
SESSION-1, HALL-2 / OTURUM-1, SALON-2

MODERATOR: Asocc. Prof. Dr. Şefik Baran TARHAN

AUTHOR	AFFILITION	ABSTRACT TITLE
Aysun Altikat	*Iğdır University*	Advancements in Green Advanced Oxidation Processes
Erdal Zengin	*The Ministry of Agriculture and Forestry, Provincial Directory of Uşak*	A New Pest in Maize For Uşak (Türkiye): Spodoptera frugiperda (J. E. Smith, 1797) (Lepidoptera: Noctuidae)
Ruziye Karaman Cengiz Türkay	*Isparta University of Applied Sciences*	Determination of Changes in Sweet Corn Applied Different Nitrogen Doses During Storage
Funda Dökmen	*Kocaeli University*	Use of Polymers in Water Conservation in Agriculture
S. Can Cengiz Mustafa Okant M. Izzet Türkoğlu	*Harran University*	Determination of The Effect of Different Plant Density on Some Yield Values in Gap Pink Fodder Nut (*Pisum arvense* L.) Cultivar Improved As A Winter Intercrop
Pooja Rasal Gaurav Kasar	*JES's SND College of Pharmacy*	A Review on Models Used in Assessment of Neuropathic Pain
R.Thanya Suganthan C	*Vellore Institute of Technology*	Analysing The Effectiveness of Using Multimodal Tools and Materials in English Language Classroom: A Systematic Review
Nataliia Korbych Oksana Liubenko Olena Vedmedenko Sergiy Lavrenko	*Kherson State Agrarian and Economic University*	Productive Qualities of The Different Breeds Geese For The Direction of The Fatty Goose Liver Production
Olena Vedmedenko Nataliia Korbych Oksana Liubenko	*Kherson State Agrarian and Economic University*	Prospects of Native Mare's Milk Production Under The Conditions of Ukraine
Sergiy Lavrenko Maria Rizak Nataliia Lavrenko	*Kherson State Agrarian and Economic University*	Vegetable Pepper As A Technical Culture

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TUESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
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SESSION-1, HALL-3 / OTURUM-1, SALON-3

MODERATOR: Fatma KAYAÇETİN

AUTHOR	AFFILITION	ABSTRACT TITLE
Ersin Gülsoy Seda Can Başoğlu	*Iğdır University*	Pre-Selection of Rose Hip (*Rosa* spp.) Genotypes Growing Naturally in Iğdir
Fatma Kayaçetin	*Ankara University*	Correlation Among Germination And Seedling Growth Of Brassica Nigra L. Under Priming Applications
Fatma Kayaçetin Oğuzhan Aydin	*Ankara University*	Yield And Quality Of Black Mustard Lines Under Autumn Sowing Season In Ankara
Elif Yürümez Canpolat Şükrü Canpolat Cemil İşlek	*Niğde Ömer Halisdemir University*	The Biological Activities of *Hypericum Perforatum* L.
Bahadır Yilmaz Sedanur Yilmaz Aslıhan Çilingir Tütüncü Harun Özer	*Ondokuz Mayıs University*	Mikrobiyal Gübre Uygulamasinin Organik Maydanoz Yetiştiriciliğinde Verim ve Kaliteye Etkisi
Oksana Liubenko Nataliia Korbych	*Kherson State Agrarian and Economic University*	Importance of Iodine and Selenium in Poultry Feeding
Sergiy Lavrenko Andriy Serbinov	*Kherson State Agrarian and Economic University*	Technological Aspects of Growing Tomatoes With Drip Irrigation
Sergiy Lavrenko Yaroslav Smirnov	*Kherson State Agrarian and Economic University*	Prospects For Growing Soybeans in Ukraine
Sergiy Lavrenko Andriy Maksimov Nataliia Lavrenko	*Kherson State Agrarian and Economic University*	Cultivation of Plants in Vertical Farms By Hydroponic Method
Gusthyta Putri Nabila Naila Tamamil Asna Hendri Hermawan Adinugraha	*UIN K.H. Abdurrahman Wahid Pekalongan*	The Use of Paylatter in Describing Business According To Islamic View

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Zoom Meeting ID: 871 0713 9228
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SESSION-1, HALL-4 / OTURUM-1, SALON-4

MODERATOR: Research Assistant Dr. Berker NACAK

AUTHOR	AFFILITION	ABSTRACT TITLE
Mehmet Altun Ustun Sahin	*Atatürk University*	Determination of CO_2 Emission From Soils With Sewage Sludge Application Under Different Irrigation Regimes Through Carbon Stock Changes
Hayriye Göknur Ağca Küçükaydin Göksel Tirpanci Sivri Ömer Öksüz	*Kırklareli University*	A New Approach To Sustainable Food Supply: Cellular Agriculture
Gülay Olcabey Ergin	*Niğde Ömer Halisdemir University*	An Eco-Friendly Approach To Control Insect Pests : Nanopesticides
Songül Yildiz Muharrem Özcan	*Recep Tayyip Erdoğan University*	Effects of Global Warming on Tea Farming
Özkan Sedat Karaman Fatma Karakaş Oğuz Ruziye Karaman	*Burdur Mehmet Akif Ersoy University*	Investigation of Alternative Forage and Silage Potential of Mung Bean
H.U. Muhammad E. Nwafor O.J. Ajayi Y. Muhammed	*Federal University of Technology*	Effects of Recommended Cocoyam Production Technologies on Output of Farmers in Enugu State, Nigeria
Valbona Cinaj	*Albanian University*	The Challenges of Implementing an e-Government ALBANIA System The case of the publication of sensitive data for Albanian citizens
Wajahat Ali Shakeel Javaid Mohammad Nabeel	*Albanian University*	A New Fermatean Fuzzy Programming Approach To Optimize The Mathematical Muti-Objective Multi-Level Solid Transportation Problem
Arunkumar R V. Kalirajan	*Tamil Nadu Agricultural University*	Turmeric Farmers and Their Extension Agency Contact Level in Tamil Nadu
Pankaj Tagad	*Kolpe Institute of Pharmacy*	An In-vitro evaluation of the anthelmintic activity of Aegle Marmelos on the Pheritima Posthuma model

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SESSION-1, HALL-5 / OTURUM-1, SALON-5

MODERATOR: Assoc. Prof. Dr. Erol SAKALLI

AUTHOR	AFFILITION	ABSTRACT TITLE
Şule Erkovan Hanife Afacan	*Eskişehir Osmangazi University*	Adaptation of some so rghum Genotypes To Eskisehir Ecological Condition
Hasan Basri Karayel	*Kütahya Dumlupınar University*	The Effect of Natural Boron Mineral Use on Essential Oil Content and Components of Fennel (*Foeniculum vulgare* Mill.)
Ertan Yildirim Melek Ekinci Metin Turan Selda Ors	*Atatürk University*	Mitigating Effect of Chrysin on Salt Stress in Cucumber (*Cucumis sativus* L.) Seedling
Melek Ekinci Ertan Yildirim Metin Turan Selda Ors	*Atatürk University*	Investigation of The Effects of Humic and Fulvic Acid on Plant Growth in Cauliflower Seedlings Grown in Herbicide-Contaminated Soil
Abdoul Nasser Aboubacar Dan Badaou Üstün Şahin	*Atatürk University*	Determination of CO2 Emission from Soil with Farm Manure Application under Different Irrigation Regimes through Carbon Stock Changes
Laila AFIA Rachid SALGHI Abdelileh MABROUK	*Ibnou Zohr University*	Enhancement of Three Curcumin Derivatives As Ecofriendlies Corrosion Inhibitors For Carbon Steel in Hcl Solution
Laila AFIA Rachid SALGHI	*Ibnou Zohr University*	Valuation of Argan Leaves Extract As Green Corrosion İnhibitor For Steel in 1m Hcl
Dipanwita Ghosh	*Maulana Abul Kalam Azad University of Technology*	Machine Learning for Early Glaucoma Detection: A Comparative Analysis of Predictive Models
V.Sandhiya R.Devi Raman R.Srinivasan	*Bharath Institute Of Higher Education And Research*	Recycling Waste Polythene Materials To Useful Products Via Pyrolysis.
Puniparthi Sunitha Elavarasi.E	*Bharath institute of higher education and research*	Human Prohibits of *Bacillus* Strains: Characterization, Safety, Microbiome, And Probiotic Carrier

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SESSION-2, HALL-1 / OTURUM-2, SALON-1

MODERATOR: Dr. Hüseyin Berk TÜRKER

AUTHOR	AFFILITION	ABSTRACT TITLE
Sefa Altikat	*Iğdır University*	Industrial Pellet Fuel Production: Conversion From Raw Materials To Energy
Elif Yürümez Canpolat Şükrü Canpolat	*Niğde Ömer Halisdemir University*	Antifungal Activity of Zinc Oxide (Zno) Nanoparticles
Gamze Kaya	*The Ministry of Agriculture and Forestry, Provincial Directory of Eskişehir*	The Effect of Different Periods of Waterlogging on Morphological and Some Physiological Characteristics of Melon
Eren Özden	*Iğdır University*	Determination of Some Morphological and Physiological Characteristics of Iğdır Şalak Melon
Eren Özden Mustafa Akbaba	*Iğdır University*	Determination of Some Morphological, Viability and Physiological Characteristics of Iğdır Super Tomato Local Genotype Seeds
Fatima Rehman Shamsa Rana Ahmed Faiz Akbar	*Government College University*	Effect of nitric oxide and hydrogen peroxide on growth, physiological and biochemical attributes of wheat (Triticum aestivum L.) plant under cadmium stress
I .Zakariya'u	*Sokoto state university*	Electrical and Optical Properties of Poly Methyl Methacrylate Incorporated With Salt For Edlc Application
Pooja.K Elavarasi.E	*Bharath Institute Of Higher Education And Research*	Agriculture and Food security in the agricultural production
Ajesh Chauhan	*IITM College of Pharmacy*	Role Of Ai in Pharma

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SESSION-2, HALL-2 / OTURUM-2, SALON-2

MODERATOR: Prof. Dr. Deniz UÇAR

AUTHOR	AFFILITION	ABSTRACT TITLE
Sema Leblebici Murat Karaer Erdem Gülümser	*Bilecik Şeyh Edebali University*	Allelopatic Effect of Forage Turnip (Brassica rapa L.) on Buckwheat (*Fagopyrum esculentum* Moench)
Yunus Emre Uslu Serap Açıkgöz	*Aydın Adnan Menderes University*	Effect of Suppression of Mechanical Transmission in Plant Viruses
Murat Olgun Muhammed Ibrahim Sayim	*Eskişehir Osmangazi University*	Assessment of Yield and Quality Traits of Advanced Barley (*Hordeum vulgare* L.) Breeding Materials in The Rainfed Conditions of The Central Anatolia Region
Sarra Zouaoui Rachid Rouabhi	*Bioactive Molecules and Applications Laboratory*	Imidacloprid's Impact on Neurotoxicity: Illuminating The Consequences of Pesticides on Biodiversity and Health
R. Srilatha Podila Padmaja	*P.V.P. Siddhartha Institute of Technology*	Voice Emotion and Gender Recognition
Anita Yasin	*Universiti Teknologi MARA*	Prevalence of Overweight in Culinary Arts Students of Vocational College A
Sushovan Khatua Debashis De	*Maulana Abul Kalam Azad University of Technology*	Optimizing Traffic Routing For Minimized Emissions in Vehicular Networks
Kannadasan Karuppaiah Ezhilvanan Mani Vinoth Raman	*Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research*	Statistical Models For Evaluate To Efficacy of Chronic Kidney Disease Control Measure

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SESSION-2, HALL-3 / OTURUM-2, SALON-3

MODERATOR: Assist. Prof. Dr. Tuba ARJUMEND

AUTHOR	AFFILITION	ABSTRACT TITLE
Berna Efe Sabahaddin Ünal Hacer Mintaş Erdal Eren Yeler	*Field Crops Central Research Institute*	Observation on Morphological and Agronomic Traits of Sheep Fescue Genotypes (Festuca ovina) in Semi-Arid Conditions
Havva Eylem Polat Ahmet Cengiz Yildirim	*Ankara University*	The Role of Geographical Indication Products in Rural Development: The Case of Kalecik District
Zeynep Nur Karakuş Yasemin Çelebi Gülşah Çalişkan Koç	*Uşak University*	Pharmacological Effects of Mullberry Leaves on Human Health
Canan Kop Bozbay Miraç Mert Yildirim Nuri Can Karaoğlu Büşra Özdöngül	*Eskisehir Osmangazi University*	Growth Performance, Digestive System Development, Relative Meat And Organ Weights, Meat Quality And Some Blood Characteristics In Japanese Quails (Coturnix Coturnix Japonica) Fed Diets Containing Goldenseal (*Helichrysum Arenarium*) Essential Oil
Bahadır Yilmaz Sedanur Yilmaz Aslıhan Çilingir Tütüncü Harun Özer	*Ondokuz Mayıs University*	Effect of Microbial Fertilizer Application on Efficiency and Quality in Organic Parsley Growing
Gita Oktavia Rosita Muhammad Usman Ariffianto Kholimah Agung Muhammad Taufiq Abadi	*State Islamic University K.H. Abdurrahman*	History of Classical Economic Thought
Elda Purwanti Khulaelatudil Azzah Lutfiyanti	*State Islamic University K.H*	Economic Thought of Classical Muslim Scientists (Zaid Bin Ali, Abu Hanifah, Abu Yusuf,Abu Ubaid)
Ihor Ponomarenko Daria Pelypenko	*State University of Trade and Economics*	Marketing Promotion of Rural Companies in The Digital Environment
Ihor Ponomarenko Sofiia Freidun	*State University of Trade and Economics*	Functioning of Rural Companies in The Electronic Trade Market
Idoko Alexander Parker Joshua Elija Njoku Obioma Uzoma	*Caritas University*	Docking Assessment of Flavonoids on Adiponectin Protein and Fat Mass and Obesity Associated (FTO) Protein as Anti-Obesity Agents: An İn-Silico Investigation

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Zoom Meeting ID: 871 0713 9228
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SESSION-2, HALL-4 / OTURUM-2, SALON-4

MODERATOR: Research Assistant Rabia GÜLİSTAN OKUTAN

AUTHOR	AFFILITION	ABSTRACT TITLE
Murat Karaer Erdem Gülümser Sema Leblebici	*Bilecik Şeyh Edebali University*	Relationship Between Bilecik Province Drought Analysis and Wheat Yield Using Standardized Precipitation Evapotranspiration Index
Özge Karadeniz Elif Demiral	*Kayseri University*	Determination of Physicochemical and Antioxidant Properties of Ice Cream With Coconut and Oat Milk
Selma Kösa Sibel Mansuroğlu Nihansu Karaçöne	*Akdeniz University*	Determination of The Effect of Two Different Growth Period on Plant Growth Characteristics in Silene Compacta
Lale Aksoy Esin Kılıç	*Eskişehir Osmangazi University*	Evaluation of Strawberry Production in Sason and its Effects on Local Development
Fatih Hancı	*Erciyes University*	An Outlook of The World Jerusalem Artichoke Market
Mustafa Çirka	*Iğdır University*	Defense Mechanisms of Plants Against Drought
Halid Sheriff Adegbusi	*Nigeria Police Academy Wudil*	Evaluation of Nutritional Quality of Nigerian Soybean (*Glycine Max*)
Halid Sheriff Adegbusi	*Nigeria Police Academy Wudil*	Improving Complementary Feeding in Nigeria: A Review of Crayfish's Nutritive and Health Values
Tutan Ghosh	*Maulana Abul Kalam Azad University of Technology*	Federated Learning-Based Intrusion Detection System For IOT
Lakshmi Devi.B.	*Bharath institute of higher education and research*	Long Non Coding Rnas (Lncrnas) in Neurodegenerative Diseases-Diagnosis and Therapeutics

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SESSION-2, HALL-5 / OTURUM-2, SALON-5

MODERATOR: Assoc. Prof. Dr. Mehmet Uğur YILDIRIM

AUTHOR	AFFILITION	ABSTRACT TITLE
Nebahat Aytuna Çerçi Meryem Burcu Külahci Betül Aydin Ebru Beyzi Abdülkadir Arslan Sevinç Demir	*Kırıkkale University*	Determination of The Biological Properties of *Aronia Melanocarpa* (Michx.) Elliott Fruit and Leaf Extracts
Sultan Karahan Azize Atik	*Çiftçiler Oil Industry and Trade LTD.*	Lupin Flour Uses in The Food Industry
Sevdiye Yorganci Serap Açikgöz	*Aydın Adnan Menderes University*	The Relationship Between Vector Transmission of Plant Viruses and Genome Organization
Canan Kop Bozbay Miraç Mert Yildirim Gökçe Bilge Ipek	*Eskisehir Osmangazi University*	Evaluation of Some Aromatic Plant Pulps As Silage
Batuhan Türkbay Safiye Pınar Tunali	*Aydın Adnan Menderes University*	Pulse Drip Irrigation Applications in Combating Drought
Ristina Siti Sundari Farhan Ahmad D Yadi Heryadi Budhi Wahyu Fitriadi Lucyana Trimo Iwan Setiawan	*University of Perjuangan Tasikmalaya*	Added Value of Coconut Sap to be Coconut Sugar
Clement Okechukwu Attamah Joy Chinenye Udenwagu	*University of Nigeria*	Assessment of Farmers' Access and Use of Agricultural Credit Facilities in Enugu West Senatorial Zone of Enugu State, Nigeria
El Houssaine Benaddi Rachid Laamari	*Analytical and molecular chemistry laboratory*	A New Biomass-Based Activated Carbon For The Removal of Cationic Dyes From The Aqueous Environments: Characterization, Kinetics, Isotherm, Thermodynamics
Wilson, Emmanuel Okon Idiong, Kokoette E	*Akwa Ibom State Polytechnic*	Electrochemical Potential-Based Diagnostics of Steel Rebar Corrosion in Concrete
Kaysa Aulia Venanda	*UIN K.H. Abdurrahman Wahid Pekalongan*	Potensi Perkembangan Perekonomian Kota Pemalang

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SESSION-3, HALL-1 / OTURUM-3, SALON-1

MODERATOR: Lecturer Volkan DENERİ

AUTHOR	AFFILITION	ABSTRACT TITLE
Sevim Atmaca Ali Endes Yusuf Yanar	*Yozgat Bozok University*	Important Soil-Borne Fungal Diseases That Cause Phytopathological Damage in Lentil Plants
Sevim Atmaca Ali Endes Yusuf Yanar	*Yozgat Bozok University*	Foliar Fungal Diseases That Cause Phytopathological Damage in Lentil Plants
Ali Endes Sevim Atmaca Güngör Yilmaz	*Yozgat Bozok University*	Significant Fungal Pathogens Impacting The Economic Viability of Hemp Cultivation
Ali Kilinç Rukiye Zengin Nurhan Keskin	*GAP International Agricultural Research Training Center*	Berry Quality Characteristics of Some Native Grape Varieties Of Sivrice (Elazığ) Ecology
Ali Kilinç Nurhan Keskin Birhan Kunter	*GAP International Agricultural Research Training Center*	Total Phenolic Compound Content and Antioxidant Activity of Some Grape Varieties Grown in Battalgazi (Malatya) Ecology At Maturity
Abdulkarim D. Kurfi Sada Ibrahim Kabir M. Galadanchi Muhammad M. Rumah	*Umaru Musa Yar'adua University Katsina*	Study of Mechanical Properties of Particle Filled Waste Bast Fiber and Epoxy Resin Composite
Malihe Jahani Sedighe Jahani	*Shandiz Institute of Higher Education*	A Review of The Role of Phenolic Compounds in Plants Under Environmental Stresses
Gbenga J. Olatunji, Funmilayo G. Adebiyi Olufemi A. Adebiyi Oyebiodun G. Longe	*University of Ibadan*	The effect of graded level of dietary supplementation of citric acid on performance and serum lipids of broiler chickens
Umaru Mohamed Gassama	*Njala University*	The Impact of Village Saving Loan Association on Small Holder Farmers in Taiama, Kori Chiefdom, Moyamba District
Umar Bello Ahmed Salisu Aliyu D. Mohammed	*Umaru Musa Yar'adua University*	Improvement of Mechanical Properties of Polymeric Wastes Composites Using Charcoal Produced From Doum Palm (*Hyphane Thebaica* L.) Fruit As Reinforcement

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SESSION-3, HALL-2 / OTURUM-3, SALON-2

MODERATOR: Assist. Prof. Dr. Tuba ARJUMEND

AUTHOR	AFFILITION	ABSTRACT TITLE
Gülden Çetin Özkan Meryem Sağkol Hümeyra Yaman Ersin Akşor Oğuzhan Aydin	*Directorate of Field Crops Central Research Institute*	Production of Haploid Plants From Hybrid Combinations of Different Safflower (*Carthamus Tinctorius* L.) Genotypes By Anther Culture Method
Gülden Çetin Özkan Yusuf Coşkun Kutay Yilmaz Hümeyra Yaman	*Directorate of Field Crops Central Research Institute*	Using of Speed Breeding Technique To Develop New Flax (*Linum Usitatissimum* L.) Genotypes
Ali Endes Sevim Atmaca	*Yozgat Bozok University*	Potential Threat on Chickpea Production Areas: Anthracnose (Ascochyta rabiei) Disease
Sibel Boysan Canal Hilal Yilmaz	*Van Yuzuncu Yil University*	Effect of Selenium Applications on Micro Element Content in Lupinus (*Lupinus Albus* L) and Soil Under Cadmium Stress Conditions
Hilal Yilmaz Sibel Boysan Canal	*Van Yuzuncu Yil University*	The Role of Iron in Drought Tolerance
Pratishtha Thakur Vinod Kumar	*Sushant University*	Nutrition & Dietetics
John Bamidele Isaac Adekunle Olufemi Ade Adegorite Solomon O. Olatunde Emmanuel S.	*College of Science*	Studies on the Performance of organic and Inorganic Fertilizer on the Growth and Yield of Cucumber (*Cucumis sativus*)
Orhena, Elizabeth Nguemo Charles-Odili, Veronica Nnamaka Ekwueme, Chika Maureen Ezoem, Uche Blessing	*Federal College of Education*	Perception of Business Education Students on Effectiveness of Siwes Administration in Federal Colleges of Education in The South-South
Besnik Hajdari	*University "Isa Boletini" Mitrovica*	The Impact of Human Resource Management on The Development of Innovative Businesses

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SESSION-3, HALL-3 / OTURUM-3, SALON-3

MODERATOR: Research Assistant Erdi Can AYTAR

AUTHOR	AFFILITION	ABSTRACT TITLE
Ismail Demir	*Kırşehir Ahi Evran University*	Rısks and Trends in World Sugar Beet Farmıng
Ismail Demir	*Kırşehir Ahi Evran University*	Changes and Trends in World Potatoes Agrıculture
Hatice Ulusoy Hüseyin Peker	*Artvin Çoruh University*	Use of Various Natural Oils in Wood Material Protection and Their Effects of Wood Materials on Some Mechanical Properties
Hatice Ulusoy Hüseyin Peker	*Artvin Çoruh University*	Use of Immortal Plant Extract in Wood Material and Its Effects on Thermogravimetric Analysis (Tga)
Şeyda Yayla M. Mesud Hürkul	*Ankara University*	Light Microscopy Analysis of Some Important Anatomical Characters of Paronychia Angorensis
Şeyda Yayla M. Mesud Hürkul	*Ankara University*	Examınatıon Of Some Anatomıcal Features of Endemıc Lycıum Anatolıcum (Solanaceae)
Al -Musbahu Abdulrahim Abdulyekeen Tunde Adebisi Jamiu Garba Sikirulai Abolaji Akande	*Kkyungpook National University*	Optimizing Crop Selection and Allocation for Maximum Yield: A QUBO Approach
Saghouri El Idrissi Imane Kettani Rajae Khalfi Chemsdoha Ferrahi Moha El Fechtali Mohamed Ziri Rabea Brhadda Najiba	*National Institute of Agronomic Research (INRA)*	Effect of Environment and Genotype on Durum Wheat : Responses of Genotypes, Yield, and Quality Parameters
Ajagbe, S.W. Yekinni, L.O., Babatunde, S.I. Bakare, M.T. "	*Federal College of Education*	Attitude, Motivation and Academic Performance of High Achieving Junior Secondary School Students in Social Studies in Oyo East Local Government, Nigeria

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SESSION-3, HALL-4 / OTURUM-3, SALON-4

MODERATOR: Assistant. Prof. Dr. Hülya ELMALI GÜLBAŞ

AUTHOR	AFFILITION	ABSTRACT TITLE
Buğra Güvercin Faruk Akyazi	*Ordu University*	Fauna of Plant Parasitic Nematodes in World Hazelnut Soils
Hakan Keles Murat Güney Gökçe Aydöner Çoban	*Yozgat Bozok University*	Summary of Walnut Cultivation in Yozgat 2018-2023
Hakan Keles Servet Aras Müjgan Güney	*Yozgat Bozok University*	Growing Potential of Jujube (*Ziziphus Jujuba* Mill.) Plant Under Yozgat Conditions
Fatma Akyüz Selçuk Gülten	*Uşak University*	Agricultural (Food) Supply Security in An Environment of Increasing Global Risk
Serhat Yıldız	*Van Yüzüncü Yıl University*	Alternative Forage Plant in Animal Nutrition; Teff (Eragrostis tef [Zucc.] Trotter)
Hülya Elmali Gülbaş	*Uşak University*	The Potential Chemosensor Fluorescent Compounds in order to Determination Of Heavy Metals contamination in Agricultural Irrigation Water
Yekinni, L.O., Kareem, K. K., Abdulrahmon, M. O., Bakare, A. O.	*Federal College of Education*	Effectiveness of Modelling on The Verbal and Arithmetic Skills of Children With Intellectual Disability in Akure South Local Govenrment of Ondo State, Nigeria
Aicha El Oualkadi Ahmed Lamarti Mohammed Mouhib Ahlam Hamim	*Nuclear Technique and Quality Research Unit*	Gamma Irradiation Effects on Fortuna Strawberry Cultivar: A Comprehensive Study of Growth, Morphology, and Genetic Implications
Nugraha Edhi Suyatma Rani Yunia Putri Fahim Muchammad Taqi Subarna	*IPB University*	Application of Nanocoating Made From Chitosan and Zno Nanoparticles To Extend The Shelf Life of Meatball
Ukpabi-Ugo, Jacinta Chigozie Anosike, Chioma Assumpta	*Michael Okpara University of Agriculture*	GCMS Profiling and In Silico Investigation of Bioactive Compounds of Hexane Extract of Sesamum Indicum Seeds to identify fertility agent: Potent Inhibitors of Angiotensin Converting Enzymes and Phosphodiesterase 1A Receptors
Pratishtha Thakur Vinod Kumar	*Sushant University*	Diabetes Mellitus: Pandemic in India

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Zoom Meeting ID: 871 0713 9228
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SESSION-3, HALL-5 / OTURUM-3, SALON-5

MODERATOR: Assist. Prof. Dr. Barış KAKİ

AUTHOR	AFFILITION	ABSTRACT TITLE
Mehmet Nur Çiftsüren Suna Akkol	*Van Yüzüncü Yıl University*	Determination of The Relationship Between Egg Production in Geese and Some Climate Factors
Mehmet Nur Çiftsüren Suna Akkol	*Van Yüzüncü Yıl University*	Determination of Relationships Between Live Weight and Some Morphological Characteristics in Norduz Sheep Using Path Analysis
Nizamettin Erbaş	*Yozgat Bozok University*	Investigation of Investments in Fixed Capital in Terms of General and Rural Employment: Yozgat Province Example
Barış Kaki	*Uşak University*	Examının The Effects of Some Clımate Characterıstıcs on Honey Productıon
Ilhan Özer Ilhan Senem Akkoç Nilgün Baysal	*Erciyes University*	The Effectiveness Of Herbal Extracts In The Fight Against Mastitis Disease And Cancer In Cattle
Suwantoko Ridhotul Hairi Ganung Nalendra Marthinus Hutabarat Thania Theresia Pangaribuan Erwin Tampubolon Satria Gumay Ilham Hapmi Yoga Putra	*University of Bengkulu*	"The Authority, Duties, and Functions of The National Human Rights Commission (Komnas HAM) in Upholding Human Rights in Indonesian"
Adeniyi B.M Kyenge B.A Adah C.A Ogungbemi K Samoh T.F	*Benue State University*	Toxicological Effects of *Heliotropium Indicum* Leaf Extracts on Albino Rat Tissues
Hilmi Dzaki Uswatun Khasanah Hilda Safitri M Farhan Ahnaf Muhammad Aris Syafi'i M. E. I	*State Islamic University K.H. Abdurrahman*	Economic Thought of Contemporary Muslim Scientists
Sanae Zriouel	*CADI AYYAD University*	Magnetic Nanoparticles for Biomedical applications
Katarina Stanojević Dragana Pavlović Jelena Matejić Aleksandra Milenković Ljiljana Stanojević	*University of Niš*	Waste Material of Wild Carrot (*Daucus carota* L.) Seeds As A Source of Natural Antiinflammatory Agents

29.11.2023

WEDNESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923
SESSION-1, HALL-1 / OTURUM-1, SALON-1

MODERATOR: Assist. Prof. Dr. Erten AKBEL

AUTHOR	AFFILITION	ABSTRACT TITLE
Osman Nezih Kenanoğlu Sevdan Yilmaz Mustafa Karga Soner Bilen	*Kastamonu University*	Safe Dose Range That Can Be Used in Nettle and Green Olive Tree Ethanolic Extracts in Artemia Enrichment
Nihan Akinci Kenanoğlu Şefika Nur Demir Sinem Öztürk Ahmet Ali Berber	*Çanakkale Onsekiz Mart University*	The Examination of The Eco-Genotoxic Effects of Pesticides on Daphnia Magna
Muhammet Ali Gündeşli	*Gaziantep University*	Essential Oil Extraction Methods: A Review
Muhammet Ali Gündeşli	*Gaziantep University*	The Phytochemical Composition of *Matricaria* L. (Chamomile): A Review
Hülya Ünver	*Düzce University*	Fruit culture in duzce province
Şakir Burak Bükücü Yakup Kadir Kömür	*Selcuk University*	Current Status of Greenhouse Fruit Growing in Türkiye
Onur Özbaş Kevser Tosun Duygu Arslan Hakan Aktaş	*Isparta Uygulamalı Bilimler University*	Effects of Old Gold Crimson (Ogc), Old Gold (Og), Hp1 And Hp2 Genes on Fruit Quality in Beef Segment Tomatoes
Aleksandra Milenković Katarina Stanojević Dragana Pavlović Jelena Matejić Jelena Stanojević Ljiljana Stanojević	*University of Niš*	Anti-inflammatory Activity of Wild Carrot (*Daucus Carota* L.) Seed Hydrolate
Iliya Ibrahim Sanda, B.Yahaya Isyaku, N.T Joseph, E.Kamba	*Kebbi State University of Science and Technology Aliero*	Studies On Some Heavy Metals and Using of Some Selected Phyco-Chemical Parameter in Zuru Dam, Kebbi Staste, Nigeria.
Ahmad Mohammad Zuru Abdullahi Abdu Muhammad Chika Mu'azu Musa Shuaibu Ishaka Muhammad	*The American University of Beirut*	Optimization of Biogas Production and Compression From Co-Digestion of Animal Dungs

29.11.2023

WEDNESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923

SESSION-1, HALL-2 / OTURUM-1, SALON-2

MODERATOR: Dr. Müge ŞAHİN

AUTHOR	AFFILITION	ABSTRACT TITLE
Iliya Ibrahim. Obaroh I.O. Isyaku, N.T.	*Kebbi State University of Science and Technology*	Assessment of Omega -3 Fatty Acid on Blood Pressure of Some Group of Students in Kebbi State University of Science and Technology, Aleiro
Chaima Mouffouk Soumia Mouffouk Hamada Haba Leila Hambaba	*University Of Batna-2*	Anti-inflammatory, antioxidant and antibacterial effects of the medicinal plant Scabiosa stellata L.
Olawale Oyemade Oyekanmi Olusoga Rasheed Otelaja	*School of Arts and Social Sciences*	Effects of Two Models Instructional Strategies on Students' Knowledge of Climate Change Concepts in Social Studies For Sustainable Development
Hafsah A. Klfout Abdullah M. Asiri Khalid A. Alamry Mahmoud A. Hussein	*King Abdulaziz University*	Synthesis of a new Polybenzoxazine-based Arylidene Moiety
Aboubakr Ben Hamou Salaheddine Farsad Ayoub Chaoui Amane Jada El Alem Noureddine	*Ibn Zohr University*	Nitric Acid Activation for Tuning the Pore Structure of Sewage Sludge Digestate Biochar Adsorbent: Implications on Methylene Blue Adsorption
Alexandrov V.S	*Kazan National Research Technical University*	Analysis of The Soil Composition of The Substance and Improvement of its Quality Using New Data Processing Approaches
Smart M.O Ibironke O.H Okumodi B.O Adeoye A.S Opawuyi M.M	*Federal College of Forestry*	Risk Assessment of Heavy Metals Concentration in Well Waters Around Metal Recycling Industries of Ikorodu South West Nigeria
Jothi Lakshmi R. Srinivasan	*Bharath Institute of Higher Education and Research*	An Over Review of Pharmacological Aspects of Diabetes Mellitus of Indian Medicinal Plants
Muninggar Nafisah Asnal Muna Shafiyya Zahra Wiwit Anisa Muhammad Sultan Mubarok Ade Gunawan	*State Islamic University K.H Abdurrahman*	Maisir in The Digital Age: An Analysis Of The Phenomenon Of Cryptocurrentcy Gambling And Its Implications
V.Sandhiya , R.Devi Raman R.Srinivasan,	*Bharath Institute Of Higher Education And Research*	Recycling Waste Polythene Materials To Useful Products Via Pyrolysis.

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WEDNESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923
SESSION-1, HALL-3 / OTURUM-1, SALON-3

MODERATOR: Assist. Prof. Dr. Pelin BARAN

AUTHOR	AFFILITION	ABSTRACT TITLE
Sheila Ojei Michael	*Admiralty University of Nigeria*	Iron deficiency anaemia in pregnancy: reexamining the nature and magnitude of this public heath concern
P. Sivaraj, K.S.Naveen C. M. Raguraman	*Annamalai University*	Implementation and testing of a solar declinatorwith water preheating
K.R.Padma K.R.Don	*Bharath University*	Wild Edible Mushrooms and Their Bioactive Compound Production Possess Antibacterial Activity
Kaila Zulfa Khoirurrizki Zakia Khoirunnisa Putri Karina Sabila M. Aris Safii M. Taufiq Abadi	*State Islamic University K.H. Abdurrahman*	Islamic Macro Concepts: Tw0 Sector Economy
Intan Athiyatul Maula Dian Nofitasari Karina Atha Nabila Muhammad Sultan Mubarok, M.E	*Fakultas Ekonomi Bisnis Dan Islam Uin K.H Abdurrahman Wahid*	The Role of Zakat in Islamic Economic Axiology
Syeda Sabika Zahra Naqvi Syed Mohsan Raza Shah	*University of Education*	Morpho-Anatomical modification in with aniaso mnifera (L.) Dunal from punjab, Pakistan: Insight into adaptation
Mita Lusari	*UIN K.H. Abdurrahman Wahid Pekalongan*	Stabilitas Perekonomian di Desa Mulyorejo
Kheloufi Abdenour Mansouri Lahouaria Mounia	*University of Batna*	Effect of Varied Temperatures on Seed Germination and Seedling Emergence in Cherimoya (Annona cherimola Mill.)
Iram Liaqat	*Govt. College University*	AI-2 QS signalling and inhibition in dental unit water line biofilm isolates

29.11.2023

WEDNESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923
SESSION-1, HALL-4 / OTURUM-1, SALON-4

MODERATOR: **Prof. Dr. Abdulrezzak MEMON**

AUTHOR	AFFILITION	ABSTRACT TITLE
Adeel Sattar Najam-Ul-Lail Muhammad Ovais Omer Mian Abdul Hafeez Muhammad Abubakr Shabbir Sammina Mahmood Muhammad Adil Rasheed Qamar Niaz	*University of Veterinary and Animal Sciences*	Biosynthesis and Characterization of Zinc oxide Nanoparticles using *Nigella sativa* against Coccidiosis in Commercial Poultry
Matej Babič	*Novo Meto*	3d Visibility Network Using For Analyzing Complexity of Microstructure of Robot Laser Hardened Specimens
R. Robert S. Meenakshi	*Vellore Institute of Technology*	An In-Depth Analysis of Multifarious Determinants Impacting English Speaking Proficiency Attainment among Rural Students in India
Chhaya Patel	*Sankalchand Patel University*	Impact of Fiscal Policy on India's Economic Growth
Vaibhav Kant Singh Kapil Kumar Nagwanshi	*Central University*	Proposing the State of the Art Data Mining Methodologies for performing Energy Audit and Management
Vaibhav Kant Singh Kapil Kumar Nagwanshi	*Central University*	Proposing the State of the Art methodologies for Conservation of Energies
Vaibhav Kant Singh Kapil Kumar Nagwanshi	*Central University*	Proposing the State of the Art Machine Learning Algorithms for the Notion of Clean and Sustainable Energy
Amina Ghaffar Sammina Mahmood Adeel Sattar	*University of Education*	Effect of Bacillus Cereus on Growth of Tomato (*Solanum Lycopersicum* L.) Irrigated With Textile Waste Water
Mubashir Mehdi	*MNS University of Agriculture Multan*	E-commerce and Consumer Buying Behavior for Agricultural products in developing countries: A case of Pakistan.
Talha Mashhood Muhammad Ibrahim Akbar Ali	*Government College University Faisalabad*	Potential anticancer and antioxidant lauric acid based hydrazones synthesis and computational slant towards the electronic properties

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WEDNESDAY / 10.00-12.00

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923

SESSION-1, HALL-5 / OTURUM-1, SALON-5

MODERATOR: Dr. Hüseyin Berk TÜRKER

AUTHOR	AFFILITION	ABSTRACT TITLE
Thanh-Dung Nguyen Huu-Nghia Duong Thi-Pha Nguyen Huu-Hiep Nguyen Huu-Thanh Nguyen	*Can Tho University*	Antibacterial Activities of Endophytic Bacteria Isolated From Adenosma Bracteosum Bonati Against Vibrio Parahaemolyticus
Angga Candra Winata Minkhatul Maula Ridwan Abu Djibran Aris Syafi'i	*State Islamic University K.H. Abdurrahman*	Economic Thought of Indonesian Muslim Scientists (Cokroaminoto, Syfrudin Prawiranegara, Moh. Hatta, H. Abdul Malik Karim Amrullah)
Laila Ameliya Muhammad Taufiq Abadi Muhammad Sultan Mubarok	*State Islamic University KH. Abdurrahmad*	Feasibility Study Analysis of Puring Fabric in Pakisputih Village Kedungwuni Subdistrict
Habil. Cristina Raluca Gh. Popescu	*Romania and The Bucharest University of Economic Studies*	Applying The Principles of Green Economy: Focusing on Circular Economy and Sustainable Development
Habil. Cristina Raluca Gh. Popescu Gheorghe N. Popescu	*Romania and The Bucharest University of Economic Studies*	Agriculture, Rural Development, and Land Reform: Recent Advances and Contributions To Environmental Sustainability
Nailun Naja Annayya Putri Sabilla Najwa Azima Muhammad Sultan Mubarok Ade Gunawan	*State Islamic University K.H Abdurrahman*	Human Nature, Ethics of Freedom and Socio-Economic Responsibility
Shinta Dewi Fitri Mukarromah	*Uin Kh Abdurrahman Wahid Pekalongan Indonesia*	Analysis of The Benefits of Purwaceng As A Medicinal Plant
Vidya Padmakumar	*Bangalore University*	Ecological Factors Shaping the Evolution and Behavior of Spoonbills: Insights for Conservation and Management
Ajayi, Olayemi T. Adeniji, Adebukola T.	*The Federal Polytechnic*	Lens and Culinary Brilliance: A Visual Journey into Food Photography's Influence on Gastronomy and Dietetics

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WEDNESDAY / 12.30-14.30

Zoom Meeting ID: 871 0713 9228
Zoom Passcode: 282923

SESSION-2, HALL-1 / OTURUM-2, SALON-1

MODERATOR: Assist. Prof. Dr. Erten AKBEL

AUTHOR	AFFILITION	ABSTRACT TITLE
Fargham Ahmed Kashish Nadeem	*COMSATS University*	Joint Family System
Angel Sara Thangamuni Naga Harika Korrapati Hiba Fathimathul Harshiba Joysha Mohan Adiba Farhin Nitol Nabeel Muhammed Rafi	*Tbilisi State Medical University*	Beauty From Within: An Interplay Between Gut and Skin Health
Wafika Erininda Givan Mauzarima Fortuna Hendri Hermawan Adinugraha	*UIN K.H. Abdurrahman Wahid Pekalongan,*	Islamic Economics: Broadening Horizons Justice and Humanity
Sholadoye Qazeem Oyeniyi	*Nigeria Police Academy*	Heavy Metals Assessment of Farmland Soil in Bagega Mining Community
Stogova Mariia Gennadievna Kopylova Maria Dmitrievna	*The Kosygin State University of Russia*	Analysing The Range of School Uniforms For Overweight Primary School Children
Omar Benamari Amina Labhar Amin Salhi Mhamed Ahari Soufian El Barkany Hassan Amhamdi	*Abdelmalek Essaadi University*	Medicinal Plants Utilized in Conventional Diabetes Treatment in Rif Issaguen District, Northern Morocco.
Sobia Maqsood Saira Akhtar Sabrina Carvalho Zeyneb Kılıç	*University of Agriculture*	Women Role in Sustainable Rural Development in Pakistan: A Systematic Review
Vaishnavi G.Sapte Sushma V.Datir Archana R. Jagtap, Abhale D.M Vivekanand Kashid	*GSS's Dr. Kolpe Institute of Pharmacy*	Formulation and Evaluation of Antimicrobial cream from tribulas terrestris ethanolic extract
Zahra Rezapour	*Islamic Azad University*	Microplastics in Aquatic Food: A Hidden Threat to Human Health
Septya Wulan Savitri Lu'luil Karomah Suci Fitria Safira Faula Arima Muhammad Sultan Mubarok	*State Islamic University K.H. Abdurrahman Wahid*	The Importance of Understandıng Maqashıd Sharıa As The Maın Goal of Islamıc Law

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WEDNESDAY / 12.30-14.30

Zoom Meeting ID: 871 0713 9228
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SESSION-2, HALL-2 / OTURUM-2, SALON-2

MODERATOR: Assoc. Prof. Dr. Bahar ATEŞ ÇAKIR

AUTHOR	AFFILITION	ABSTRACT TITLE
Deven S. Aspalani Samiksha B. Bachkar Abhishek M. Aher Sujata K. Sonawane Kuldipak R. Parkhe Vivekanand A. Kashid	*GSS's Dr. Kolpe Institute of Pharmacy*	Analytical Method Development and Validation of Thiazolidenediones Derivative by RP-HPLC
Anuja V. Pathade Kalyani P. Parkhe Nilesh T. Parkhe Varun V. Joshi Vivekanand A. Kashid	*GSS's Dr. Kolpe Institute of Pharmacy*	Review on: Neurocosmetics: The Skin-Brain Connection
Meshal Nasser Alnefaıe	*King Abdulaziz University*	"Harnessing Dextrin Derivatives for Targeted Drug Delivery with Nanofibers"
Aarti R. Sanap Prajakta A. Halnor Ratna D. Nikum Vivekananda A. Kashid	*GSS's Dr. Kolpe Institute of Pharmacy*	A Review on Mouth Dissolving Tablet
Shivam Rajput Rishabha Malviya Chetan Vashist Manju Kamra	*IITM College of Pharmacy*	The Application of Herbal Extract-Loaded Nano-formulations for Pest Control in Agriculture: A Review
Ahmed K. Usman Saidat O. Abdulrasheed Yusuf A. Hassan Echeche Onuh Yahaya Aliyu	*Ahmadu Bello University*	A Review of Economic Importance and Viability of Gold: A Case Study of Ilesha Schist Belt, Southwestern Nigeria
Mousami Das Binod Chandra Tripathy Omer Kisi	*Tripura University*	Characterization of Lacunary -Convergent Sequences in Credibility Space
Salek Lagdali Youssef Miyah Mohamed El-Habacha Guellaa Mahmoudy Mohammed Benjelloun Soulaiman Iaich Mohamed Zerbet Mohamed Chiban Fouad Sinan	*Ibnou Zohr University*	Optimal Preparation of Low-cost Phongitic Clay Microfiltration (MF) Membrane for Real-wastewater Treatment from Clothes Washing
Tamanna Rai Rishabha Malviya	*United College of Engineering and Research*	Anticancer Agent from Marine Source
Abdelileh Mabrouk Laila Afia	*University of Sfax*	Application of Pid Control in Greenhouse Temperature Regulation For Crop Growth Optimization

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SESSION-2, HALL-3 / OTURUM-2, SALON-3

MODERATOR: Assoc. Prof. Dr. Yaser AÇIKBAŞ

AUTHOR	AFFILITION	ABSTRACT TITLE
Hammouti Marwane El Haım Mohamed	*Abdelmalek Essaâdi University*	Anticipating Risk Mapping for Land Movements in Morocco's Middle Rif Region
Firas Alali Marwa Jawad Asaad Sh.	*University of Kerbala*	Identification of Passalurus Ambiguus in Domestic Rabbits (Oryctolagus cuniculus) in Karbala Province, Iraq.
Clement Okechukwu Attamah Jane Mbolle Chah	*University of Nigeria*	Impact of Rural Finance Institution Building Programme on Socio-Economic Life of Beneficiaries in Anambra State, Nigeria
Ajayi, Olayemi T. Busari, Waheed B.	*Lead City University*	Media Literacy and Agricultural Sustainability: Empowering Rural Communities through Communication Education
Sujata Sonawane	*savitribai phule Pune University*	Development of Validated Rp-Hplc Method For Quantitative Estimation of Pioglitazone Hcl in Bulk And Formulation By Using Quality By Design Approach
Luis Angel Kalpana Nanjareddy Miguel Lara Flores Manoj-Kumar Arthikala	*Luis Angel ENES Unidad-León, Universidad Nacional Autónoma de México*	Unveiling The Impact of Mad41 Overexpression on Mycorrhizal Symbiosis in Common Bean
Lakshmi Devi.B	*Bharath institute of higher education and research*	Long Non Coding Rnas (Lncrnas) in Neurodegenerative Diseases-Diagnosis and Therapeutics
A.Lourdu Terancia	*Bharath Institute of Higher Education and Research*	Micrornas – Biogenesis,Mechanism of Action and Role in Breast Cancer – Overview
Rama Andika Madya Agus Setiawan Dian Iswandaru Yulia Rahma Fitriana	*University of Lampung*	Bird Diversity and Feed Guild in The Way Kambas National Park Buffer Zone (Case Study of Labuhan Ratu Vii Village)
Sulaiman S.Y. Hafsat M.	*Umaru Musa Yar'adua University*	Biosorption of Ni2+ and Pb2+ from waste water using doum palm nut shell activated carbon

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WEDNESDAY / 12.30-14.30

Zoom Meeting ID: 871 0713 9228
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SESSION-2, HALL-4 / OTURUM-2, SALON-4

MODERATOR: Asocc. Prof. Dr. Şefik Baran TARHAN

AUTHOR	AFFILITION	ABSTRACT TITLE
Siddhantika S. Jadhav Madhuri E.Kawade, Sakshi P. Deore, Snehal S. Kasar, Dipak D. Nalawade, Vivekanand A. Kashid	*GSS's Dr. Kolpe Institute of Pharmacy*	Review on: To study the Pharmacognostic and Pharmacological Activities of *Datura Stramonium* Linn
Vaishnavi D. Charmal Mayuri B. Gaikwad Vaibhav U. Lasure Vivekanand A. Kashid	*GSS's Dr. Kolpe Institute of Pharmacy*	Review on: Pharmacological Activity of *Selaginella Bryopteris* L.
Sundy Alagba Obazi Chiamaka Eucharia Ubachukwu Samuel Esheya Esheya	*University of Nigeria*	Knowledge of Farmers on Pesticide Safety Practices in Nsukka Local Government Area, Enugu State, Nigeria
Madhumithasekar Elavarasi E, R Srinivasan	*Bharath institute of higher education and research selaiyur*	The Future of Agriculture: Unleashing the potential of Digital Technologies
Abhijit Chatterjee Pintu Das Sanjeev Kumar Sinha	*Sarala Birla University*	Groundwater Quality Assessment in Rural Area of Ranchi: A Case Study
J.Jayadurka Elavarasi E, R Srinivasan	*bharath institute of higher education and research chennai*	New Agriculture Technology in Modern Farming - A Review
Snehal Kolpe	*Savitribai phule pune University*	Formulation and Evaluation of Anti Ageing Cream Using *Tinospora Cordifolia* (Giloy)
Nur Kholifah Dewi Nurul Alfianah Nabila Maydina Ma Farotul Jannah Muhammad Sultan Mubarok Muhammad Shulthoni	*State Islamic University K.H Abdurrahman*	Islamic Economic Principles and Their Implementation in Everyday Life
Malihe Jahani Sedighe Jahani	*Shandiz Institute of Higher Education*	A Review of The Importance of Hydroponic Cultivation in Plants
Muhammad Tahir Khan Madeeha Shahzad Lodhi Dong Qing Wei	*The University of Lahore*	Novel mutations in LdtB, PonA1, and PonA2 in pyrazinamide resistance clinical isolates of Mycobacterium tuberculosis

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SESSION-2, HALL-5 / OTURUM-2, SALON-5

MODERATOR: İlknur ESKİMEZ

AUTHOR	AFFILITION	ABSTRACT TITLE
Samreen Gul Khan Naheed Akhtar Fozia Anjum Kiran Aftab	*GC University*	Synthesis and Antiseizure Potential of 1,3,4-Oxadiazole Based Derivatives
Beraich Abdessamad Anass Choukoud El Farissi Hammadi El Bachiri Ali Talhaoui Abdelmoneam	*Mohammed First University*	Comparison of the volatile compounds of essential oil extracted from Pistacia Lentiscus stems via hydrodistillation, and microwave and their effects on its antioxidant, and antifungal activity
Salisu Nuhu	*Hussaini Adamu Federal Polytechnic Kazaure*	Optimization of Quicklime Production from Eggshells Using Response Surface Methodology
Tayebi Amani Moumou Mohammedine Harnafi Hicham	*Mohammed Premier University*	Determination of Total Phenolic, Total Flavonoid Content, and Antioxidant Activity in Basil Extracts (*Ocimum basilicum* L).
Andrey Popatanasov	*Bulgarian Academy of Sciences*	Effects of hormopriming with cytokinins on the germination of Solanum lycopersicum cv. Ideal
Akande, Sikirulai Abolaji Ishaq, Maimuna Abdullahi Ishaq, Zainab Abdulrahim, Al-Musbahu Adedayo, Olufemi Adesola	*Federal University of Technology*	Exploring The Intuitive Impact of Optimization Techniques on The Control of Food Security and Agricultural Profit Margins
Kabiru Hamisu Abdullahi Taufeeq Lawal Ahmad Usman Shu'aib Zaharadeen Abdullahi Yusuf Hassan Ali	*Kano University of Science and Technology*	Structural Analysis of Wudil Cattle Market (Kara) Wudil Local Government of Kano State-Nigeria

SYMPOSIUM PHOTOS





SYMPOSIUM PHOTOS





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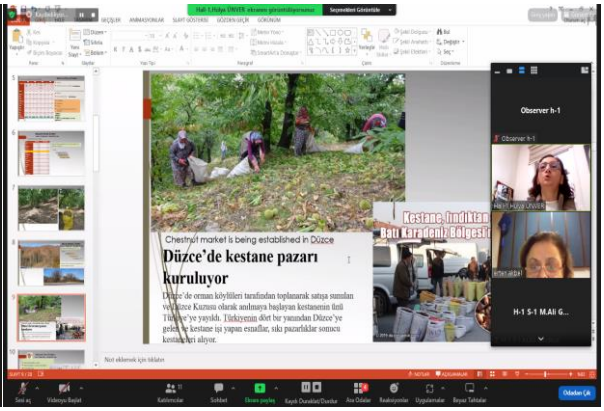




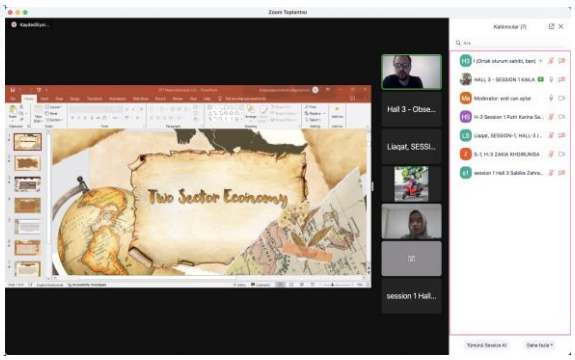


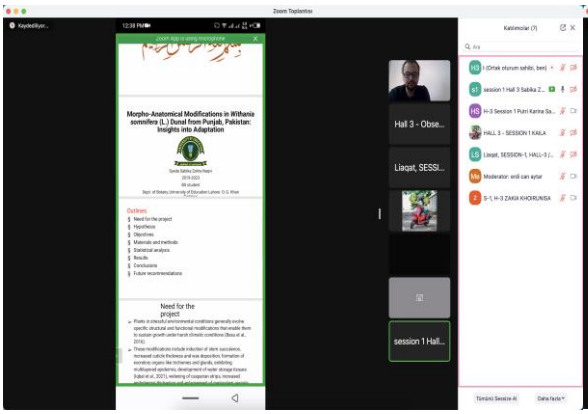
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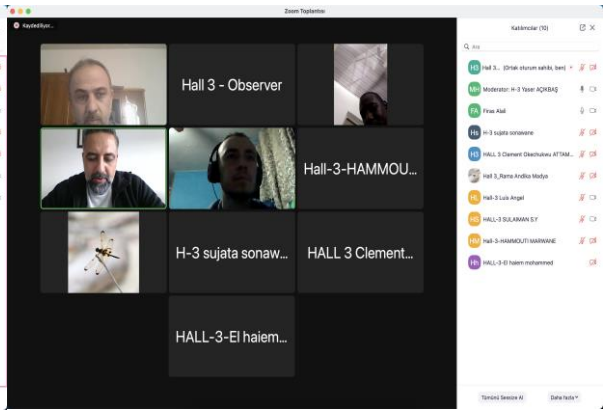




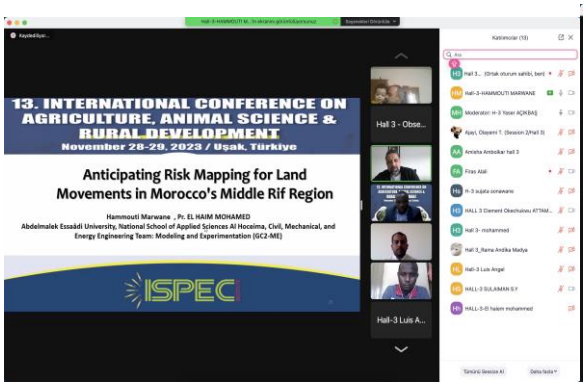


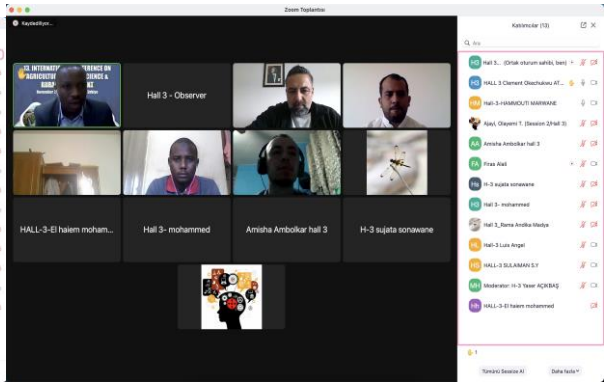


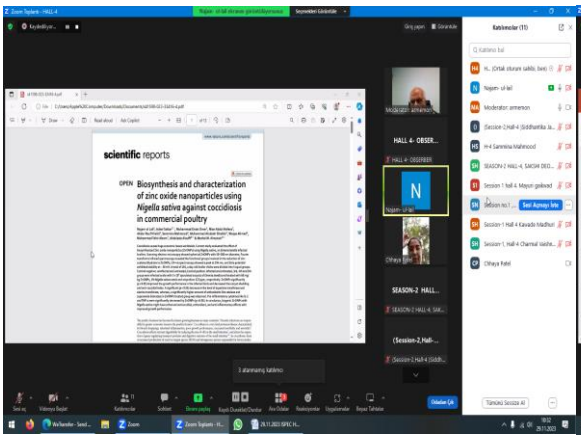


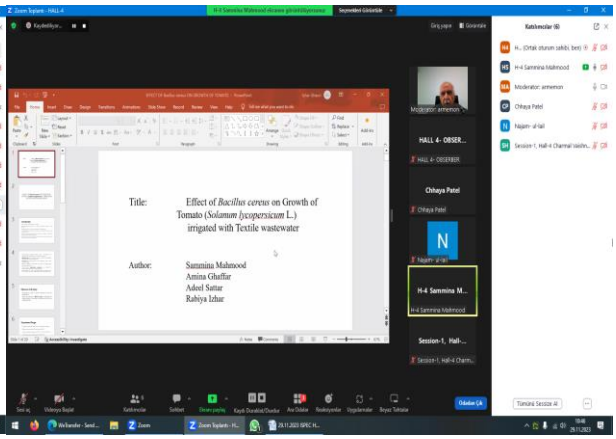


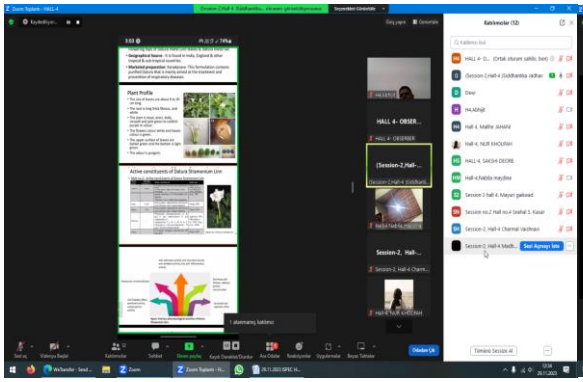
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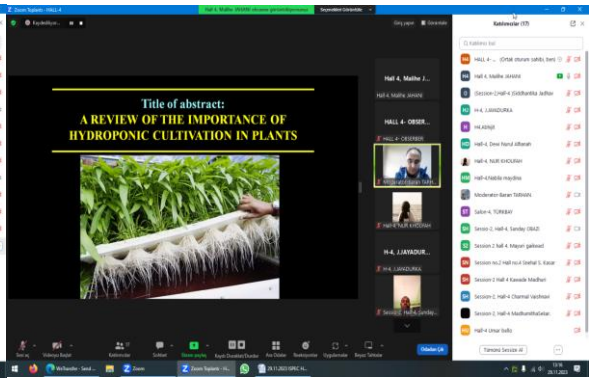




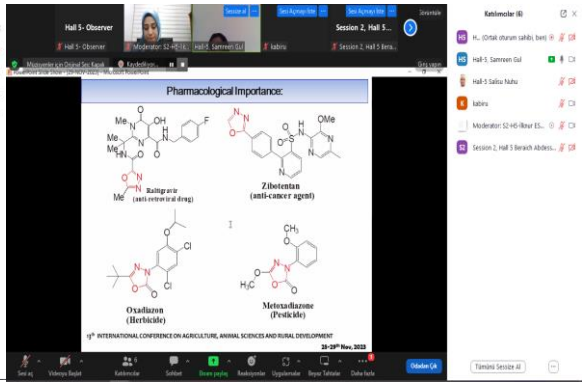












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Brassica nigra L.'NIN PRIMING UYGULAMALARI ALTINDA ÇİMLENME VE FIDE BÜYÜMESI ARASINDAKİ KORELASYON

Doc. Dr. Fatma KAYACETİN (ORCID: 0000-0002-7029-2825)
Ankara University, Kalecik Vocational School, 06870 Kalecik/Ankara, Turkey
Email: kayacetin@ankara.edu.tr

Özet
Brassica nigra L., alternatif enerji bitkisi olma potansiyelinin yanı sıra aromatik ve tıbbi kullanım açısından da Türkiye'nin genetik kaynakları arasında yer alan önemli türlerden biridir. Siyah hardal genotiplerinin hızlı ve homojen olarak çıkışının sağlanması Türkiye'deki ıslah çalışmalarında önemli bir konudur. Bu nedenle tohum priming uygulaması siyah hardal genotiplerinde eş zamanlı ve homojen çıkışın sağlanmasına katkıda bulunabilecek tekniklerdendir. Bu çalışmada Ankara orijinli saf hat siyah hardal tohumları kullanılarak; priming süreleri (TD1; 12 saat, TD2; 24 saat, TD3; 36 saat, TD4; 48 saat) ve priming uygulamaları (C; kontrol, TP1; hidro-priming, TP2; -0.1 MPa, TP3; -0.2 MPa, TP4; -0.4 MPa, TP5; 0.6 MPa, TP6; -0.8 MPa PEG)'nın 14 gün boyunca siyah hardalın tohum çimlenmesi ve fide büyüme özelliklerine etkisi tespit edilmiştir. Bu çalışmanın amacı, priming uygulamaları altında siyah hardalın çalışılan özellikleri arasındaki korelasyonu belirlemektir. Sonuçlar, priming uygulamaları altında çeşitli çimlenme ve fide özellikleri arasında pozitif ve anlamlı bir korelasyonun belirlendiğini göstermiştir. Kök uzunluğunun fide uzunluğu (0.854), fide yaş ağırlığı (0.620) ve fide kuru ağırlığı (0.427) ile anlamlı ve pozitif korelasyonu tespit edilmiştir. Benzer şekilde çimlenme yüzdesi, ortalama çimlenme süresi ile pozitif korelasyon göstermiştir (0.610). Bu tür bilgiler, bu türün ıslahı ve yetiştirme tekniğine ilişkin kritik parametrelerin belirlenmesinde faydalı olabilir.
Anahtar Kelimeler: Osmo– and Hydro–priming, Priming Süreleri, Correlation Coefficient, Çimlenme, Siyah Hardal

CORRELATION AMONG GERMINATION AND SEEDLING GROWTH OF *BRASSICA NIGRA* L. UNDER PRIMING APPLICATIONS

Abstract
Brassica nigra L. is an important species among the genetic resources of Turkey for aromatic and medicinal uses as well as its potential as an alternative energy plant. Achieving fast and uniform emergence of black mustard genotypes is an important issue in breeding studies in Turkey. For this reason, seed priming application is a technique that can contribute to ensuring fast and uniform emergence in black mustard genotypes. The seeds of pure line black mustard, orginated in Ankara, Turkey, was used in this study. The priming durations (TD1; 12 h, TD2; 24 h, TD3; 36 h, TD4; 48 h) and priming applications (C; control- non-priming, TP1; hydro-priming, TP2; -0.1 MPa, TP3; -0.2 MPa, TP4; -0.4 MPa, TP5; 0.6 MPa, TP6; -0.8 MPa of PEG) were used and detected seed germination and seedling growth traits of black mustard for 14 days. The present study focused on detecting the correlation among studies featuring black mustard under priming applications. The results showed that a significant positive correlation was demonstrated among the studied germination features. The root length demonstrated a significantly positive correlation with seedling length (0.854), seedling fresh weight (0.620), and seedling dry weight (0.427). Similarly, the germination percentages showed a positive correlation with the mean germination time (0.610). Such information may be useful in determining critical parameters regarding the breeding and agronomy of this species.
Keywords: Osmo– and Hydro–priming, Priming Durations, Correlation Coefficient, Germination, Black Mustard

INTRODUCTION

Germination is the first important stage of plant growth and development, which significantly affects yield (Kayacetin et al., 2018; Zhu et al., 2019). One of the biggest challenges in the growth and development of black mustard, which has significant potential as a spice and energy plant, is ensuring fast and uniform germination (Kayacetin, 2023). Priming techniques (osmo-priming with polyethylene glycol and hydro-priming) may be effective ways to shorten germination time and increase fast and uniform emergence/germination (Raj and Raj, 2019; Lutts et al., 2016; Rehman et al., 2015).

The correlation relationship between priming applications and various germination characteristics has been reported in studies conducted in different species (Singh et al., 2020; Rai-Kalal and Jajoo, 2021; Kayacetin, 2022a). Correlation determines the level of relationship between the features identified in the study and priming practices. It can provide information on the relationship among different germination characteristics, which may be useful in black mustard breeding for the selection of lines with desired features. Information about the correlation among the examined traits may be useful in the selection of lines with superior characteristics (Aasim et al., 2023).

The current study aimed at the detected correlation among the studies' features (root length, seedling length, seedling fresh weight, seedling dry weight, germination percentage, and mean germination time) of black mustard under priming applications [priming durations (12, 24, 36 and 48 h), non-priming, hydro-priming and five osmo-priming doses (-0.1, -0.2, -0.4, 0.6 and -0.8 MPa of PEG) applications].

1. MATERIALS and METHODS

The research was conducted at the Kalecik Vocational School, Ankara University. The experiment was conducted using a randomized block trial design with three replications.The osmotic potential of polyethylene glycol was arranged at -0.2, -0.4, -0.6, and -0.8 MPa according to Michel and Kaufmann (1973). Black mustard seeds were treated with an immersed solution of -0.2, -0.4, -0.6, and -0.8 MPa polyethylene glycol for 12, 24, 36, and 48 hours and

in distilled water (hydroprimed) for 12, 24, 36, and 48 hours (Kayacetin, 2023). The unprimed seeds were used as controls. The seeds were subjected to different priming durations and applications, then carefully dried and used 24 h after priming. The samples of 50 seeds were placed in 9 cm petri dishes containing two layers of filter paper. The seeds were considered germinated when ~2 mm radicles appeared. The number of seeds that germinated each day was recorded. After 14 days of germination, five seedlings were randomly selected from each replicate and root length, shoot length, seedling length and seedling fresh weight were measured and their averages were calculated. The root length, shoot length and seedling length were measured with a ruler. The dry weight of seedlings was determined by drying the samples in an oven at 70 °C for 48 h. The mean germination time and germination percentage were calculated according to Bakhshandeh et al. (2017).

Statistical analyses: The significant differences were tested by the analysis of variance and means separated by the LSD test ($P<0.05$) and correlation analysis performed using JMP ($P<0.05$). Correlation analysis was employed to assess the relationship among germination and seedling growth traits (Kalayci, 2005).

2. RESULTS and DISCUSSION

Root length, shoot length, seedling length, seedling fresh and dry weight, germination percentage and mean germination time were significantly decreased by seed priming durations as compared to 12 h (TD1) (Table 1) and by seed priming durations applications as compared to non-primed (C) (Table 2).

The results indicated that maximum root length (2.2 cm), seedling dry weight (0.5 mg), and mean germination (1.6 d) were noted for TD1 priming durations appications. The maximum shoot length (3.0 cm) and seedling length (5.0 cm) were noted for TD3; seedling fresh weight (5.4 mg) and germination percentage (91.2%) were noted for TD2 priming duration applications. Minimum root length (1.2 cm), seedling length (2.5 cm), seedling fresh weight (3.3 mg), seedling dry weight (0.3 mg), germination percentage (75.6%) and mean germination (1.4 d) were noted for TD4 priming duration applications (Table 1).

Table 1. Effect of priming durations on germination and seedling parameters of black mustard

Priming durations	Root length (cm)	Shoot length (cm)	Seedling length (cm)	Seedling fresh weight (mg)	Seedling dry weight (mg)	Germination percentage (%)	Mean germination time (day)
TD1	2.2±0.72a	2.7±0.63c	4.9±1.01a	5.3±1.50b	0.5±0.13a	91.1±8.16a	1.6±0.29a
TD2	2.1±0.60b	2.8±0.50b	4.9±0.89b	5.4±0.73a	0.4±0.04b	91.2±8.11a	1.6±0.29a
TD3	2.0±0.49c	3.0±0.94a	5.0±1.34a	4.8±0.95c	0.4±0.09c	85.6±8.43b	1.5±0.35b
TD4	1.2±0.22d	2.3±0.45d	2.5±0.62c	3.3±1.79d	0.3±0.09d	75.6±11.64c	1.4±0.37c

Data represent the mean values (Kayacetin, 2023)) ± standard deviations. Different letters indicate significant differences at $P<0.05$. TD1: 12 h, TD2: 24 h, TD3: 36 h, TD4: 48 h

The results showed that maximum root length (2.2 cm) was noted for TP4; shoot length (3.1 cm), seedling length (5.1 cm) and seedling fresh weight (6.0 mg) were noted for TP2; seedling dry weight (0.5 mg), germination percentage (96.7%), and mean germination (2.3 d) were for noted control. Minimum root length (1.4 cm), seedling length (3.2 cm), seedling fresh weight (3.2 mg), seedling dry weight (0.4 mg), germination percentage (72.7%), and mean germination (1.3 d) were determined for TP6 priming applications (Table 2).

Table 2. Effect of priming applications on germination and seedling parameters of black mustard

Priming applications	Root length (cm)	Shoot length (cm)	Seedling length (cm)	Seedling fresh weight (mg)	Seedling dry weight (mg)	Germination percentage (%)	Mean germination time (day)
C	1.5±0.42e	2.9±0.08c	4.3±0.42e	4.3±0.44e	0.5±0.48a	96.7±0.98a	2.3±0.05a
TP1	1.8±0.52d	3.0±0.74b	4.8±1.25d	4.6±0.35d	0.4±0.03d	87.3±15.12d	1.5±0.12b
TP2	2.0±0.56c	3.1±0.62a	5.1±1.02a	6.0±0.30a	0.4±0.03c	92.2±6.12b	1.4±0.11c
TP3	2.2±0.58a	2.7±0.91e	4.9±0.92c	5.5±0.70b	0.4±0.11c	90.3±7.52c	1.4±0.14cd
TP4	2.2±0.65a	2.8±0.71d	5.0±1.33b	5.3±2.38c	0.5±0.17b	84.8±7.79e	1.4±0.13cd
TP5	2.1±0.79b	2.7±0.71f	4.8±1.25d	4.0±1.77f	0.4±0.11e	77.2±6.46f	1.3±0.12d
TP6	1.4±0.60f	1.8±0.39g	3.2±0.52f	3.2±1.56g	0.4±0.05e	72.7±5.35g	1.3±0.09e

Data represent the mean values (Kayacetin, 2023) ± standard deviations. Different letters indicate significant differences at $P<0.05$. C: Non-primed, TP1: Hydro-primed, TP2: -0.1 MPa PEG primed, TP3: -0.2 MPa PEG primed, TP4: -0.4 MPa PEG primed, TP5: -0.6 MPa PEG primed

According to the correlation coefficient analysis between the studied traits of black mustard under priming applications, that is detected in Table 3, the results of this study showed that a significant positive correlation was observed among the studied traits at $P< 0.01$ probability. Root length demonstrated a significant positive correlation with shoot length (0.478), seedling

length (0.854), seedling fresh weight (0.620), seedling dry weight (0.427) and germination percentage (0.408). Shoot length showed a significant positive correlation with seedling length (0.865), seedling fresh weight (0.653), seedling dry weight (0.489) and germination percentage (0.526). Seedling length demonstrated a significant positive correlation with seedling fresh weight (0.741), seedling dry weight (0.533), and germination percentage (0.545). Seedling fresh weight was significantly positively correlated with seedling dry weight (0.628), and germination percentage (0.589). Seedling dry weight demonstrated a significantly positive correlation with germination percentage (0.541), and mean germination time (0.456). In addition, germination percentage was significantly correlated with the mean germination time (0.610). Catiempo et al. (2021) reported that the seedling dry weight and shoot length (0.608 to 0.694) had a positive correlation with priming. A significant positive correlation between traits indicates a linear relationship as the values increase or decrease together. Kayecetin (2022b) reported that there is a significant correlation between germination characteristics in the study conducted to evaluate the effects of individual and combined drought and salinity stress on safflower genotypes.

Table 3. Correlation analysis among germination and seedling parameters of black mustard under priming applications

	RL	ShL	SL	SFW	SDW	GP	MGT
Root length	1	0.478**	0.854**	0.620**	0.427**	0.408**	-0.112
Shoot length		1	0.865**	0.653**	0.489**	0.526**	0.169
Seedling length			1	0.741**	0.533**	0.545**	0.036
Seedling fresh weight				1	0.628**	0.589**	0.078
Seedling dry weight					1	0.541**	0.456**
Germination percentage						1	0.610**
Mean germination time							1

**$P<0.01$

Correlation with lines/varieties/genotypes under different experimental conditions can then be applied to further validate the obtained data (Ahmed et al., 2019; Griffo et al., 2023). The correlation among germination and seedling growth traits tested under priming applications in laboratory conditions can save time and labor during the selection of genotypes, because the improvement in the variables under priming applications can also improve another variable with which it has a positive correlation (Maurya et al., 2019; Kayacetin, 2022b).

CONCLUSION

The results demonstrated that a mostly significant positive correlation was determined among the studied features (root length, shoot length, seedling length, seedling fresh weight, seedling dry weight, mean germination time and germination percentage). This information may be useful in determining critical and desired parameters regarding the breeding and agronomy of this species. The finding could improve our understanding of seed priming and would be useful for healthy germination and growth.

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