Ankara University Faculty of Agriculture

JOURNAL OF AGRICULTURAL SCIENCES

TARIM BILIMLERI DERGISI

e-ISSN: 2148-9297

Ankara - TURKEY



JOURNAL OF AGRICULTURAL SCIENCES ____

TARIM BİLİMLERİ DERGİSİ

ANKARA UNIVERSITY FACULTY OF AGRICULTURE

Product Information

Publisher Ankara University, Faculty of Agriculture

e-ISSN 2148-9297

Owner (On Behalf of Faculty) Prof. Dr. Hasan Huseyin ATAR

Editor-in-Chief Prof. Dr. Halit APAYDIN

In Charge of Publication Unit

Agricultural Engineer Asim GOKKAYA

Journal Administrator Salih OZAYDIN

Library Coordinator Dr. Can BESIMOGLU

IT Coordinator Lecturer Murat KOSECAVUS

Graphic Design Ismet KARAASLAN

Date of Online Publication 01.9.2022

Frequency Published four times a year

Type of Publication Double-blind peer-reviewed, widely distributed periodical

Aims and Scope JAS publishes high quality original research articles that contain

innovation or emerging technology in all fields of agricultural

sciences for the development of agriculture.

Indexed and Abstracted in Clarivate Science Citation Index Expanded (SCIE)

Elsevier-Scopus

TUBITAK-ULAKBIM-TRDizin

CAB International FAO-AGRIS SOBIAD OpenAire

Management Address Journal of Agricultural Sciences

Tarım Bilimleri Dergisi

Ankara University Faculty of Agriculture

Publication Department

06110 Diskapi/Ankara-TURKEY Telephone: +90 312 596 14 24 Fax: +90 312 317 67 24 E-mail: tbdeditor@ankara.edu.tr

http://jas.ankara.edu.tr/



JOURNAL OF AGRICULTURAL SCIENCES ____

TARIM BİLİMLERİ DERGİSİ Ankara University Faculty of Agriculture

Editor-in-Chief

Halit APAYDIN, Ankara University, Ankara, TURKEY

Managing Editor Editorial Board

Muhittin Onur AKCA, Ankara University, Ankara, TURKEY

Abdul Shakoor CHAUDHRY, Newcastle University, ENGLAND Ahmet ULUDAG, Canakkale Onsekiz Mart University, TURKEY

Akasya TOPCU, Ankara University, TURKEY Ali Adnan HAYALOĞLU, Inonu University, TURKEY

Ali UNLUKARA, Erciyes University, TURKEY

Anna Maria DE GIROLAMO, Italian National Research Council, ITALY

Belgin COSGE ŞENKAL, Yozgat Bozok University, TURKEY

Burhan OZKAN, Akdeniz University, TURKEY

Claudia Di BENE, Research Centre for Agriculture and Environment, ITALY

Donald SUAREZ, USDA ARS Salinity Laboratory, USA

Duygu SEMIZ, Ankara University, TURKEY Engin YENICE, Ankara University, TURKEY Erhan MUTLU, Akdeniz University, TURKEY

Farhat JABEEN, Government College University, PAKISTAN

Fazıl SEN, Van Yuzuncu Yil University, TURKEY Filiz ERTUNC, Ankara University, TURKEY

Giuseppe BADAGLIACCA, Mediterranean University of Reggio Calabria, ITALY

Giuseppe GAVAZZI, University of Milan, ITALY

Gniewko NIEDBALA, Poznań University of Life Sciences, POLAND Hasan YETIM, Istanbul Sebahattin Zaim University, TURKEY

Huseyin GULER, Ege University, TURKEY

Ismail KARACA, Isparta University of Applied Sciences, TURKEY

Isil CAKCI, Ankara University, TURKEY

Julia MALYSH, All-Russian Institute for Plant Protection, RUSSIA

Karina BATISTA Instituto de Zootecnia, BRAZIL

Kwok-wing CHAU, The Hong Kong Polytechnic University, CHINA

Mahmut ELP, Kastamonu University, TURKEY Mine TURKTAS, Gazi University, TURKEY

Mehmet Emin CALISKAN, Nigde Omer Halisdemir University, TURKEY

Panagiotis SIMITZIS, Agricultural University of Athens, GREECE

Peter SCHAUSBERGER, University of Vienna, AUSTRIA

Renata BAZOK, University of Zagreb, CROATIA

Sefa TARHAN, Tokat Gaziosmanpaşa University, TURKEY

Selen SAYGIN, Ankara University, TURKEY

Semra DEMIR, Van Yuzuncu Yil University, TURKEY Serpil SAHIN, Middle East Technical University, TURKEY Stanislav TRDAN, University of Ljubljana, SLOVENIA

Tuba SANLI, Ankara University, TURKEY

Turkan AKTAS, Namık Kemal Üniversity, TÜRKEY

Umut TOPRAK, Ankara University, TURKEY

Yasemin KAVDIR, Canakkale Onsekiz Mart University, TURKEY

Yildiz AKA KACAR, Cukurova University, TURKEY

Yonca YUCEER, Canakkale Onsekiz Mart University, TURKEY

Advisory Board

Aiit VARMA, Amity University

Erdal OZKAN, The Ohio State University Ibrahim ORTAS, Çukurova University Kyeong Uk KIM, Seoul National University Murad CANAKCI, Akdeniz University



CONTENTS 2022, 28(3)

Review: Environmental Abiotic Stress and Secondary Metabolites Production in Medicinal Plants: A Review Arjita PUNETHA, Dipender KUMAR, Priyanka SURYAVANSHI, Rajendra Chandra PADALIA, Venkatesha KATANAPALYA THIMMAIAH	351
Research articles: Effect of Parental Genotypes and Their Reciprocal Crosses on Haploid Plant Production by Anther Culture and Confirmation of Double Haploids by Flow Cytometry in Bread Wheat Hussein Abdullah AHMED AHMED, Güray AKDOĞAN, Sancar Fatih ÖZCAN, Surendra BARPETE	363
Characterization of Antimicrobial Peptide Fraction Producing Lactobacillus spp. Based on LC/MS-MS and Determination of ACE-inhibitory Activity in Kefir Merve ATALAY, Didem ŞAHİNGİL	372
Effects of Donor x Inducer Interaction on the Success of Haploid Induction and Comparison of Haploid Seed Identification Methods in the In vivo Maternal Haploid Technique in Maize Fatih KAHRIMAN, Umut SONGUR, Abdullah DİŞBUDAK, Sezgin KIZIK, Berk VURAL	385
Effect of Combined or Separate Administration of Beta Carotene-Vitamin E and hCG on Fertility in Sheep Lambs	396
Mehmet Ferit ÖZMEN, Erkan SAY, Ümüt CİRİT Impacts of High and Low-Input Farming Systems on the Quality Change of Safflower Oil While Intercropped with Bitter Vetch Azin NAJAFABADI, Jalal JALILIAN	401
An efficient Regeneration Protocol for <i>in vitro</i> Direct Organogenesis in Einkorn (<i>Triticum monococcum L.</i>) Wheat Günce ŞAHIN, Mehmet ÖRGEÇ, Nusret ZENCIRCI	412
Natural Vanillin Production from Isoeugenol by Using <i>Pseudomonas putida</i> in Biphasic Bioconversion Medium	423
Huseyin KARAKAYA, Murat YILMAZTEKIN Effect of Supplementation of Urea on the Nutritive Value and Fermentation Characteristics of Apple Pulp Silages	430
Önder CANBOLAT	
Development of an IoT-Based (LoRaWAN) Tractor Tracking System Çağdaş CIVELEK	438
Possibilities of Use Fertilizer Industry Waste Gypsum Material of Improve Sodic and Boron Soils Barış BAHÇECİ, Ali Fuat TARI, İdris BAHÇECİ	449
Exponential Type Estimators Using Sub-Sampling Method with Applications in Agriculture Ceren ÜNAL, Cem KADILAR	457

Biostabilization of Tannery Sludge Compost by Vermicomposting Yiğit Nevzat KAMAN, Nur OKUR, Hüseyin Hüsnü KAYIKÇIOĞLU	473
Effect of Preharvest Calcium Chloride Treatment on Some Quality Characteristics and Bioactive Compounds of Sweet Cherry Cultivars Derya ERBAŞ, Mehmet Ali KOYUNCU	481
Extraction and Physicochemical Characterization of Chitosan from Pink Shrimp (<i>Parapenaeus longirostris</i>) Shell Wastes Özen Yusuf ÖĞRETMEN, Barış KARSLI, Emre ÇAĞLAK	490
Carbon Storage Potential and its Distributions in the Particle Size Fractions in Harran Plain, Turkey ibrahim Halil YANARDAĞ, Asuman BÜYÜKKILIÇ YANARDAĞ, Ahmet R. MERMUT, Ángel FAZ CANO	501
The Effects of Gas Changes in the Shelter in the Summer Period on the Milk yield and Dry Material Consumption of Anatolian Water Buffalo (Bubalus bubalis) Taşkın DEĞİRMENCİOĞLU	511
Genetic Characterization of Some Species of Vetch (VICIA L.) Grown in Turkey with SSR Markers Cebrail YILDIRIM, Onur OKUMUŞ, Satı UZUN, Şeyda Nur TURKAY, Ahmet SAY, Melike BAKIR	518
Determining the Relationship of Evapotranspiration with Precipitation and Temperature Over Turkey Mustafa KUZAY, Mustafa TUNA, Mustafa TOMBUL	525
The Role of Different Planting Types in Mitigating Urban Heat Island Effects: A Case Study of Gaziantep, Turkey Murat YÜCEKAYA, Ahmet Salih GÜNAYDIN	535
Effects of Tillage Method, Drainage Management and Temporal Variability on Some Soil Physical Properties and Organic Matter Mahmoud SHABANPOUR, Salman FEKRI, Iraj BAGHERI, Sayed Hossein PAYMAN, Fatemeh RAHIMI-AJDADI	545