

# JOURNAL OF AGRICULTURAL SCIENCE AND TECHNOLOGY

Volume 18  
Number 3  
May 2016

## CONTENTS

### BIOSYSTEMS AND FOOD SCIENCE

- Comparing Quality of a Telescopic Boom Sprayer with Conventional Orchard Sprayers in Iran.  
*A. Jafari Malekabadi, M. Sadeghi, and H. Zaki Dizaji* 585
- Combined Use of Black Barberry (*Berberis crataegina* L.) Extract and Nitrite in Cooked Beef Sausages during the Refrigerated Storage.  
*A. Khaleghi, R. Kasaai, K. Khosravi, and K. Rezaei* 601
- Data Reduction of a Numerically Simulated Sugar Extraction Process in Counter-current Flow Horizontal Extractors.  
*H. Kiani, M. Hojjatoleslami, and S. M. Mousavi* 615
- Effect of Refining and Thermal Processes on Olive Oil Properties.  
*M. S. Mirrezaie Roodaki, M. A. Sahari, B. Ghiassi Tarzi, M. Barzegar, and M. Gharachorloo* 629
- Effects of Sucrose Substitution with Date Syrup and Date Liquid Sugar on the Physicochemical Properties of Dough and Biscuits.  
*M. Majzoobi, H. Mansouri, G. Mesbahi, A. Farahnaky, and M. T. Golmakani* 643
- Some Physicochemical Properties of Date Syrup, Concentrate, and Liquid Sugar in Comparison with Sucrose Solutions.  
*A. Farahnaky, M. Mardani, Gh. Mesbahi, M. Majzoobi, and M. T. Golmakani* 657

### NATURAL RESOURCES

- Estimation of Growth and Mortality Parameters of Croaker *Atrubucca alcocki* in Pakistani Waters.  
*K. H. Memon, Q. Liu, M. A. Kalhor, K. Nazir, B. Waryani, M. S. Chang, and A. Nabi* 669
- Comparative Evaluation of Neural Network and Regression Based Models to Simulate Runoff and Sediment Yield in an Outer Himalayan Watershed.  
*S. Sudhishri, A. Kumar, and J. K. Singh* 681
- Erosion Risk Mapping Using CORINE Methodology for Goz Watershed in Kahramanmaras Region, Turkey.  
*M. Reis, A. E. Akay, and G. Savaci* 695

### PLANT SCIENCE

- Proline Accumulation and Related Genes in Wheat Leaves under Salinity Stress.  
*M. Tavakoli, K. Poustini, and H. Alizadeh* 707
- Effect of Pre-harvest Nutrients Application and Bagging on Quality and Shelf Life of Mango (*Mangifera indica* L.) Fruits cv. Amrapali.  
*M. S. Jakhar, and S. Pathak* 717
- Interactive Effects of Nitrogen Form and Oxygen Concentration on Growth and Nutritional Status of Eggplant in Hydroponics.  
*H. R. Roosta, M. H. Bagheri, M. Hamidpour, and M. R. Roozban* 731

Continued on back cover

**Continued from front cover:**

**PLANT SCIENCE**

- Micropropagation of *Astragalus adscendens*: A Source of Gaz-angabin Manna in Iran (Persian Manna).  
*Gh. Esmaeili, M. Azizi, H. Aroei, and L. Samiei* 741
- Selecting Parental Lines among Cultivated and Wild Species of Okra for Hybridization Aiming at YVMV Disease Resistance.  
*T. Seth, A. Chattopadhyay, S. Chatterjee, S. Dutta, and B. Singh* 751
- Molecular Characterization of Rhizobia from Revertants of Non-nodulating Cultivar and Normal Cultivar of Chickpea.  
*P. Suneja, S. Piplani, P. Dahiya, and S. S. Dudeja* 763
- Molecular Identification and Characterization of Phosphate Solubilizing *Pseudomonas* sp. Isolated from Rhizosphere of Mash Bean (*Vigna Mungo* L.) for Growth Promotion in Wheat.  
*M. Ehsan, I. Ahmed, R. Hayat, M. Iqbal, N. Bibi, and N. Khalid* 775
- Parametric and Non-parametric Measures for Evaluating Yield Stability and Adaptability in Barley Doubled Haploid Lines.  
*M. Khalili, and A. Pour-Aboughadareh* 789
- PCR-based Detection of Genetically Modified Soybean at a Grain Receiving Port in Iran.  
*L. Sarmadi, A. Alemzadeh, and B. Ghareyazie* 805
- SOIL AND WATER**
- Design and Management of a Drip Irrigation System for an Optimum Potato Yield.  
*N. Yavuz, and S. Suheri* 817
- Phenology and Yield of Spring Maize (*Zea mays* L.) under Different Drip Irrigation Regimes and Planting Methods.  
*H. Singh Brar, K. Kumar Vashist, and S. Bedi* 831
- Conservation Practices and Management in Ukrainian Mollisols.  
*Y. S. Kravchenko, Q. Chen, X. Liu, S. J. Herbert, and X. Zhang* 845
- Promotion of Wheat Growth under Salt Stress by Halotolerant Bacteria Containing ACC deaminase.  
*A. A. Pourbabaee, E. Bahmani, H. A. Alikhani, and S. Emami* 855
- Soil Quality Assessments in Some Iranian Saffron Fields.  
*A. Ranjbar, H. Emami, R. Khorasani, and A. R. Karimi Karouyeh* 865