

Vol. 11, No. 2, April 2017

International Journal of

# Plant Production

Corgan University of Agricultural Sciences and Natural Descurses

# International Journal of Plant Production



#### **Executive Director:**

Najafinejad, A., President of GUASNR, Gorgan, Iran

#### Editor-in-Chief

Soltani, A., GUASNR, Gorgan, Iran

#### Editors

Bagherieh-Najjar, M.B., Golestan University, Gorgan, Iran Kamkar, B., GUASNR, Gorgan, Iran Khormali, F., GUASNR, Gorgan, Iran Sadeghipour, H.R., Golestan University, Gorgan, Iran

#### **Editorial Board Members:**

Ehdaie, B., University of California, Riverside, CA, USA

Fallahi, E., University of Idaho, Parma, Idaho, USA

Gholipoor, M., Shahrood University of Technology, Shahrood, Iran

Hashemi, A., University of Massachusetts Amherst, MA, USA

Hoogenboom, G., Washington State University, Prosser, WA, USA

Kashaninejad, M., GUASNR, Gorgan, Iran

Manschadi, A.M., University of Natural Resources and Life Sciences, Vienna, Austria

Montemurro, F., Research Unit for Cropping Systems in Dry Environments (SCA), Metaponto, Italy

Pala, M., Ankara, Turkey

Robertson, M.J., CSIRO, Wembley, Australia

Sepaskhah, A.R., Shiraz University, Shiraz, Iran

Sharifani, M.M., GUASNR, Gorgan, Iran

Shiraiwa, T., Kyoto University, Kyoto, Japan

Siddique, K., the University of Western Australia, Crawley, Australia

Waliyar, F., ICRISAT, Bamako, Mali

Yu, Q., University of Technology, Sydney, Australia

#### **Editorial Manager:**

Hajjarpoor, A., GUASNR, Gorgan, Iran

#### **Executive Manager:**

Eimantalab, M., GUASNR, Gorgan, Iran

Aims and Scope: International Journal of Plant Production (IJPP) publishes original research papers and review papers related to physiology, ecology and production of *field crops and forages* at field, farm and landscape level. IJPP does not publish papers with a background in genetics and plant breeding, plant molecular biology, plant biotechnology, as well as soil science, meteorology, product process and post-harvest management unless they are strongly related to plant production under field conditions.

Papers should be original, unpublished and not being considered for publication elsewhere. Papers based on limited data or of local importance, and results from routine experiments will not normally be considered for publication. Field experiments should include at least two years and/or two environments. Papers on plants other than field crops and forages, and papers based on controlled-environment experiments will not be considered.

Preferred topics are: (1) yield gap in cropping systems: estimation, causes and closing measures, (2) ecological intensification of plant production, (3) improvement of water and nutrients management in plant production systems, (4) environmental impact of plant production, (5) climate change and plant production, and (6) responses of plant communities to extreme weather conditions.

Publishing plan: IJPP is published in yearly volumes of four issues on January, April, July and October.

**Contact information:** Journals Office, Vice-Presidency for Research, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan 49138-15739, Iran.

Website: www.ijpp.info, Email: ijpp@gau.ac.ir, Phone: +98-17-32245884, Fax: +98-17-32225989



### International Journal of Plant Production 11 (2), April 2017 ISSN: 1735-6814 (Print), 1735-8043 (Online) www.ijpp.info



## Contents

Responses of root growth and distribution of maize to nitrogen application patterns under partial root-zone irrigation.	209
C.L. Szemruch, M.A. Cantamutto, F.A. García, M. Aguirre, S.J. Renteria, D.P. Rondanini Hybrid sunflower seed yield, composition and deterioration after chemical desiccation	225
M. Asemanrafat, T. Honar Effect of water stress and plant density on canopy temperature, yield components and protein concentration of red bean ( <i>Phaseolus vulgaris</i> L. ev. Akhtar)	241
S. Rahimzadeh, A.R. Pirzad Microorganisms (AMF and PSB) interaction on linseed productivity under water-deficit condition	259
M. Kołodziejczyk, J. Antonkiewicz, B. Kulig Effect of living mulches and conventional methods of weed control on weed occurrence and nutrient uptake in potato	275
B. Janosevic, Z. Dolijanovic, V. Dragicevic, M. Simic, M. Dodevska, S. Djordjevic, Dj. Moravcevic, R. Miodragovic Cover crop effects on the fate of N in sweet maize ( <i>Zea mays</i> L. <i>saccharata</i> Sturt.) production	
in a semiarid region	285
S. Ji, L. Tong, S. Kang, F. Li, H. Lu, T. Du, S. Li, R. Ding A modified optimal stomatal conductance model under water-stressed condition	295
M. Nazari, F. Razzaghi, D. Khalili, A.A. Kamgar-Haghighi, S.M. Tahami Zarandi Regionalization of dryland farming potential as influenced by droughts in western Iran	315
S.H. Ahmadi, M. Agharezaee, A.A. Kamgar-Haghighi, A.R. Sepaskhah Comparing canopy temperature and leaf water potential as irrigation scheduling criteria of potato in water-saving irrigation strategies	333