International Journal of Agricultural and Biological Engineering (IJABE)

Open Access at http://www.ijabe.org

Table of Contents

Volume 9, Number 3, May, 2016

Invited Review/Research Article (IRA)

Review of tensairity and its applications in agricultural aviation

.....Zang Ying, Gu Xiuyan, Zhou Zhiyan, Luo Xiwen, Zang Yu, Qi Xingyuan, et al. (1)

Development and application of mechanized maize harvesters

······Yang Li, Cui Tao, Qu Zhe, Li Kehong, Yin Xiaowei, Han Dandan, et al. (15)

Applied Science, Engineering and Technology (ASET)

Evaluation of dual crop coefficient approach on evapotranspiration calculation of cherry trees

Gait analysis of goat at different slopes and study on biomimetic walking mechanism

.....Zhang Fu, Wang Wei, Zhang Guoying, Wang Jun, Qiu Zhaomei, Mao Pengjun (40)

Power and Machinery Systems (PMS)

Development of a mobile powered hole digger for orchard tree cultivation using a slider-crank feed mechanismZong Wangyuan, Wang Jingliang, Huang Xiaomao, Yu Dong, Zhao Yingbiao, Sean Graham (48) Optimized design and experiment on ring mold pelletizer for producing biomass fuel pelletsGao Wei, Lope G Tabil, Zhao Rongfei, Liu Dejun (57) Effects of key design parameters of tine furrow opener on soil seedbed propertiesZhang Xiangcai, Li Hongwen, Du Ruicheng, Ma Shaochun, He Jin, Wang Qingjie, et al. (67) Determination of the draft force for different subsoiler points using discrete element methodLi Bo, Xia Rui, Liu Fanyi, Chen Jun, Han Wenting, Han Bing (81) Optimization of working parameters for puddling and flatting machine in paddy fieldXu Chunlin, Zhang Chengliang, Li Lianhao, Li Mingjin (88) Vibration test and analysis of mini-tillerLi Guo, Chen Jian, Xie Hangjia, Wang Shimeng (97)

Natural Resources and Environmental Systems (NRES)

Calibration and validation of AquaCrop for deficit and full irrigation of tomato

.....Ransford Opoku Darko, Yuan Shouqi, Yan Haofang, Liu Junping, Agnes Abbey (104)

Information Technology, Sensors and Control Systems (ITSCS)

Smartphone based precise monitoring method for farm operation

.....Wu Caicong, Zhou Lin, Wang Jie, Cai Yaping (111)

Design of soil moisture distribution sensor based on high-frequency capacitance

······Yan Hua, Tang Zejun, Xing Zhen, Gao Dingneng, Hong Haoxing (122)

Image segmentation algorithm for greenhouse cucumber canopy under various natural lighting conditions

.....Sun Guoxiang, Li Yongbo, Wang Xiaochan, Hu Guyue, Wang Xuan, Zhang Yu (130)

Biosystems, Biological and Ecological Engineering (BBEE)

Synthesis and characterization of a starch-based cationic flocculant for microalgae harvesting

.....Cheng Yanling, Hua Wei, Liu Wenhui, Wang Wanqing, Ye Xiao, Li Liang, et al.(139)

Renewable Energy and Material Systems (REMS)

Anaerobic digestion of heat treated sludge liquor by pilot scale mesophilic EGSB reactor

.....Zhao Jing, Qiao Wei, Wang Wei, Gao Fang, Xiao Zheng (146) Determination of input-output energy and economic analysis of Lavender production in Turkey

······Osman Gökdoğan (154)

Agro-product and Food Processing Systems (AFPS)

Microstructure changing and moisture removing of lychee during microwave vacuum drying

-------Huang Luelue, Qiao Fang, Fan Daming (162)

Experiment and simulation research of storage for small grain steel silo

.....Zhang Ledao, Chen Xi, Liu Hang, Peng Wei, Zhang Zhongjie, Ren Guangyue (170) Discriminant analysis of terrestrial animal fat and oil adulteration in fish oil by infrared spectroscopy

······Xu Lingzhi, Gao Fei, Yang Zengling, Han Lujia, Liu Xian (179)

Safety, Health and Ergonomics (SHE)

Experimental study on the uptake and effects of arsenic originated from poultry litter on the growth of *Brassica napus* in greenhouse pot cultivation and health risk assessment

.....Xie Haiyun, Han Deming, Cheng Jinping, Wang Liang, Zhou Pei, Wang Wenhua (186) Comparative study of two modeling approaches for predicting heavy metals contaminant migration from polyethylene bagsNoble Banadda, Fredrick Lule, Cornelius Sempala, Julia Kigozi (194)

Cover Caption

Rice Production Mechanization Research Team (Cover, Inside Front Cover and Inside Back Cover)

Information

International Editorial Board(Front Insert I)