International Journal of Agricultural and Biological Engineering (IJABE)

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

Table of Contents

Volume 16, Number 2, March, 2023

Applied Science, Engineering and Technology (ASET)

Effects of spray adjuvants and operation modes on droplet deposition and elm aphid control using an unmanned aerial vehicle················ Zechen Dou, Zhihao Fang, Xiaoqiang Han, Muhammad Zeeshan, Yapeng Liu, Yubin Lan (1) Downwash airflow field distribution characteristics and their effect on the spray field distribution of the DJI T30 six-rotor plant protection UAV
······ Haiyan Zhang, Sheng Wen, Chunling Chen, Qi Liu, Tongyu Xu, Shengde Chen, et al. (10) Simple decision-making model for orchard air-assisted spraying airflow
Xiang Wang, Yuru Feng, Wei Fu, Jiangtao Qi, Jianli Song (23) Design of a high-voltage electrostatic ultrasonic atomization nozzle and its droplet adhesion effects on aeroponically cultivated plant roots
Animal, Plant and Facility System (APFS)
Evaluation of the nonmarket value of livestock and poultry feces returning to farmland utilization using CVM in Heilongjiang, China
Power and Machinery Systems (PMS)
Design and test of a multi-edge toothed cutting device for membrane-impurity mixed material
Investigation of the pin-roller metering device and tube effect for wheat seeds and granular fertilizers based on DEM Sugirbay Adilet, Kaiyuan Zhao, Guangyao Liu, Nukeshev Sayakhat, Jun Chen, Guangrui Hu, et al. (103)
Design and experimental research on disc-type seeding device for single-bud sugarcane seeds
Parameter optimization and test of hydraulic soil insertion device of orchard gas explosion subsoiling and fertilizing machine

Natural Resources and Environmental Systems (NRES)

Optimizing water-saving irrigation schemes for rice (<i>Oryza sativa</i> L.) using DSSAT-CERES-Rice model Shikai Gao, Qiongqiong Gu, Xuewen Gong, Yanbin Li, Shaofeng Yan, Yuanyuan Li (142) Effect of temperature on the leaching of heavy metals from nickel mine tailings in the arctic area, Norway Shuai Fu, Jinmei Lu, Ingar Walder, Daishe Wu (152) Nitrogen use in double cropping soybean with non-fertilized winter oilseed crops Ronghao Liu, Stephen Gregg, Axel Garcia y Garcia (159) Determination of energy use efficiency and greenhouse gas emissions in peach production Cihan Demir, Osman Gökdoğan (165)
Information Technology, Sensors and Control Systems (ITSCS)
Recognition of field roads based on improved U-Net++ Network Lili Yang, Yuanbo Li, Mengshuai Chang, Yuanyuan Xu, Bingbing Hu, Xinxin Wang, et al. (171) Summer maize LAI retrieval based on multi-source remote sensing data Fangjiang Pan, Jinkai Guo, Jianchi Miao, Haiyu Xu, Bingquan Tian, Daocai Gong, et al. (179) Development of the precision feeding system for sows via a rule-based expert system Chong Chen, Xingqiao Liu, Chaoji Liu, Qin Pan (187) Integrating field images and microclimate data to realize multi-day ahead forecasting of maize crop coverage using CNN-LSTM Xin Wang, Yu Yang, Xin Zhao, Min Huang, Qibing Zhu (199) Posture-invariant hybrid scaling weight measurement algorithm for live eels Qing Liu, Yuxing Han, Guoqi Yan, Jiasi Mo, Zishang Yang (207) Method for the automatic recognition of cropland headland images based on deep learning Yujie Qiao, Hui Liu, Zhijun Meng, Jingping Chen, Luyao Ma (216) Multi-class detection of cherry tomatoes using improved YOLOv4-Tiny
······Fu Zhang, Zijun Chen, Shaukat Ali, Ning Yang, Sanling Fu, Yakun Zhang (225)
Renewable Energy and Material Systems (REMS)
Numerical research on biomass wastewater treatment using double-partition vessel with off-centered impellers
Agro-product and Food Processing Systems (AFPS)
Analysis and performance test on dynamic seed corn threshing and conveying process with variable diameter and spacing · · · · · · Fei Dai, Yiming Zhao, Yuanxiang Liu, Ruijie Shi, Shanglong Xin, Qiufeng Fu, et al. (259) A novel method of automatic peeling for Poria cocos based on image processing · · · · · · Xiongchu Zhang, Bingqi Chen, Zhian Zheng, Wenjie Wang, Xin Fang, Congli Zhang (267)
Cover Caption
Research on unmanned agricultural machinery from CAU
Information
Fourth-term IJABE International Editorial Board · · · · · (Front Insert I)