《中文核心期刊要目总览》收录 Ei Compendex(核心版)收录 百种中国杰出学术期刊 RCCSE中国权威学术期刊









ISSN 1002-6819 CN 11-2047/S **CODEN NGOXEO** www.tcsae.org



NONGYE GONGCHENG XUEBAO

TRANSACTIONS OF THE CHINESE SOCIETY OF AGRICULTURAL ENGINEERING

2020年 第36卷VOL.36



农业工程学报

2020年10月第19期 总第395期(第36卷)

目 次

• 农业装备工程与机械化 •

油菜集排器供种装置侧向倾斜排种性能试验与分析
王 磊,廖宜涛,张青松,刘 海,王宝山,廖庆喜(1)
带式残膜揉搓打包机设计与试验王 征,王吉奎,唐永飞,罗勇军(11)
缓释肥侧位深施及用量对油菜产量和肥料利用率的影响
不同铃壳物理参数对机采棉采摘力学特性的影响
张龙唱,张宏文,王 磊,傅秀清,陈廷官,王 军,谷艳清 (30)
固体颗粒对高压叶片泵配流副油膜特性影响的数值模拟 李少年,张 磊,常露丹,王 煜,代鹏云 (38)
超声波对微细通道内纳米制冷剂流动沸腾传热影响 罗小平,喻 葭,王 文(50)
•农业航空工程•
了
无人机影像反演玉米冠层 LAI 和叶绿素含量的参数确定
• 农业水土工程 •
水肥耦合对加气滴灌加工番茄产量及品质的影响 王振华,陈潇洁,吕德生,李文昊,王天宇,魏驰林(66)
基于 PWM 技术的大型变量喷灌机整机水力性能研究及优化
华北平原不同种植制度对粮食作物氮素利用和土壤氮库的影响
东北地区干旱特征与春玉米生长季干旱主导气象因子
山地黄壤区玉米不同生育期土壤抗蚀性特征
南方红壤丘陵区侵蚀沟道内土壤团聚体及有机碳特征
基于变量优选与机器学习的干旱区湿地土壤盐渍化数字制图马国林,丁建丽,韩礼敬,张子鹏(124)
黄河三角洲不同地表覆被类型和微地貌的土壤盐分空间分布
王瑞燕,孔沈彬,许 璐,李玉环,程韦翰,赵恩来(132)
施磷水平和接种 AMF 与解磷细菌对苜蓿产量及磷素利用效率的影响
基于 LMDI-SD 耦合模型的绿色发展灌区水资源承载力模拟 ····································
至 1 LINDI-3D 個日快生的冰口及水准色小贝娜小我刀快奶 一級 一位,同工类,物 $-$ 赋(130)

不同水灰比的牛顿型水泥浆液流变性随时间变体	七规律											
	杨志全,	丁 一,	杨	溢,	朱颖)彦,	张	杰,	郭力	、发,	陈兴贡	贵(161)
• 农业信息与电气技术 •												
基于 Wi-Fi 无线感知技术的奶牛爬跨行为识别··			·郝王	.胜,	林	强,	王纠	生兰,	郭	敏,	逯玉兰	生(168)
基于改进实例分割算法的智能猪只盘点系统设计	+		•••••	•••••		•••••	·胡云	云鹤,	苍	岩,	乔玉左	色(177)
• 农业生物环境与能源工程 •												
不同热解温度生物质炭对羊粪堆肥过程氮素损失	夫的减控	效果										
	王海候,	韩奇隆,	刘泽	≦凯,	金档	頻,	施材	木林 ,	沈明	月星,	顾海东	£ (184)
菌酶协同处理改善玉米秸秆堆肥品质			•••••	•••••	·李	雯,	李作	亭锋 ,	郭君	苦钰,	顾 斤	欠(192)
农村垃圾厌氧-准好氧时空联合生物反应器中微						_			,			
	•••••	•••••	・郭幸	5飞,	韩智	了男,	史	瑞,	李	浩,	刘	吉(200)
百菌清降解菌的分离鉴定及功能基因分析	•••••	·任晓洁,	贺壮	上壮,	单	昕,	赵王	玉斌,	宋テ	亡达,	赵新河	可(209)
绿狐尾藻湿地对养殖废水中不同污染负荷氮去阳	余效应 …		· 朱辉	犀翔,	张权	討楠 ,	彭克	を湘,	刘	锋,	肖润木	木(217)
基于改进极限学习机的水体溶解氧预测方法			·施	珮,	匡	亮,	袁才	、明,	张纟	工燕,	李光粉	军(225)
大豆油和地沟油制备生物柴油生命周期评价												
杨兴林,	刘岩冰,	朱宗渊,	顾丛	以汇,	芮逸	达欣 ,	王	群,	张晴	美卓,	王天礼	羊(233)
• 土地保障与生态安全 •												
论乡村多功能演化与乡村聚落转型			· 周国	1华,	戴柯	P燕 ,	贺丰	色华,	谭雪	雪兰,	何当	生 (242)
粮食安全与生态安全双视角下中国省域耕地保持	户补偿研	究					·刘禾	刊花,	张声	5昕,	刘向华	岸(252)
松嫩平原北部粮食主产区克山县三生空间识别	•••••		•••••	•••••	•••••		·隋虫	工均,	宋	戈,	张红林	每(264)
1988—2017年中国基本农田保护研究动态演化	分析(英	文)	•••••	•••••	•••••		·钱反	凤魁,	周	阳,	顾汉力	色(272)
• 农产品加工工程 •												
挤压稳定化处理对米糠各组分蛋白结构及功能	生质的影	响										
段庆松,	段玉敏,	肖志刚,	王可	「心,	李	航,	王	娜,	王伯		高育ŧ	至(283)
高效打蛋破壳刀片渗硼与渗矾处理后微观组织	与性能变	化										
万强,												
海带自然晾晒与热泵烘干级联干燥自动控制系统												
不同温度处理对红芸豆蛋白热稳定性及结构的												
高温短时热空气处理促进甘薯愈伤的工艺优化。	•••••		·刘寿	野迪,	吕晓	龙,	王彩	5霞,	孙	洁,	姜微》	支 (313)

Transactions of the Chinese Society of Agricultural Engineering Vol.36 No.19 Oct. 2020 CONTENTS

• Agricultural Equipment Engineering and Mechanization •

Experiments and analysis on seeding performance of seed feeding device of rapeseed centralized metering device under lateral til
Design and test of the belt-type residual film rubbing and baling machine
Effects of lateral deep application and dosage of slow-release fertilizer on yield and fertilizer utilization efficiency of rap
(Brassica napus L.)
Lyu Weisheng, Xiao Xiaojun, Xiao Guobin, Huang Tianbao, XiaoFuliang, Li Yazhen, Han Depeng, Zheng Wei (19)
Influences of different boll shell physical parameters on mechanical properties of machine-harvested cottons
Zhang Longchang, Zhang Hongwen, Wang Lei, Fu Xiuqing, Chen Tingguan, Wang Jun, Gu Yanqing (30)
Numerical simulation of effects of solid particles on oil film characteristics of port pair of high-pressure vane pump
Li Shaonian, Zhang Lei, Chang Ludan, Wang Yu, Dai Pengyun (38)
Effects of ultrasonic wave on flow and boiling heat transfer of nano-refrigerant in microchannels
Luo Xiaoping, Yu Jia, Wang Wen (50)
• Agricultural Aviation Engineering •
Determining the retrieving parameters of corn canopy LAI and chlorophyll content computed using UAV image
• Soil and Water Engineering •
Effects of water and fertilizer coupling on the yield and quality of processing tomato under aerated drip irrigation
Research and optimization of hydraulic characteristics of large-scale variable sprinkler irrigation machine based on PWN
technology ······ Mo Jinqiu, Huang Xiaolin, Li Wentao, Li Yanming (76)

Effects of different cropping systems on food crop nitrogen utilization and soil nitrogen pool in North China Plain
Drought characteristics and dominant meteorological factors driving drought in spring maize growing season in northeast
China
Soil anti-erodibility at different growth stages of maize in hilly yellow soil areas
Characteristics of soil aggregates and organic carbon in eroded gully in red soil region of Southern China
Zhang Xiang, Li Xiao, Lin Jie, Qian Zhou, Zeng Guangruo, Cui Linlin (115)
Digital mapping of soil salinization in arid area wetland based on variable optimized selection and machine learning
Spatial distribution of soil salinity under different surface land cover types and micro-topography in the Yellow River Delta
Effects of phosphorus application and inoculation arbuscular mycorrhizae fungi (AMF) and phosphate solubilizing bacteria or
dry matter yield and phosphorus use efficiency of alfalfa
Liu Junying, Hui Jinfeng, Sun Mengyao, Liu Xuanshuai, Lu Weihua, Ma Chunhui, Zhang Qianbing (142)
Simulation of water resource carrying capacity based on LMDI-SD model in green development irrigation areas
Hydration-time-dependent rheological behaviors of Newtonian cement grouts with different water cement ratios
• Agricultural Information and Electrical Technologies •
Recognition of crawling behavior of dairy cows using Wi-Fi wireless sensing technology
Design of intelligent pig counting system based on improved instance segmentation algorithm
• Agricultural Bioenvironmental and Energy Engineering •
Effects of biochar at different pyrolysis temperatures on reduction and control of nitrogen loss in sheep manure composting
process

Effects of synergistic treatment of microorganism and enzyme improving composting quailty of maize stovers
Li Wen, Li Tingfeng, Guo Junyu, Gu Xin (192)
Analysis of microbial community in the anaerobic/semi-aerobic spatiotemporal bioreactor for rural wastes
Guo Nanfei, Han Zhiyong, Shi Rui, Li Hao, Liu Jie (200)
Isolation, identification and functional gene analysis of chlorothalonil degrading bacteria
Effect of myriophyllum elatinoides wetland on nitrogen removal from swine wastewater under different pollution loads
Dissolved oxygen prediction for water quality of aquaculture using improved ELM network
Life cycle assessment of biodiesel from soybean oil and waste oil
Yang Xinglin, Liu Yanbing, Zhu Zongyuan, Gu Conghui, Rui Yixin, Wang Qun, Zhang Xizhuo, Wang Tianxiang (233)
• Land Security and Ecological Safety •
Rural multifunctional evolution and rural settlements transformation
Zhou Guohua, Dai Liuyan, He Yanhua, Tan Xuelan, He Lan (242)
Compensation of provincial cultivated land protection in China from the dual perspectives of food security and ecological
security
Liu Lihua, Zhang Bingxin, Liu Xianghua (252)
Identification of production-living-ecological space at Keshan County level in main grain producing areas in northern Songne
Plain, China Sui Hongjun, Song Ge, Zhang Hongmei (264)
Dynamic evolution analysis of basic farmland protection research in China from 1988 to 2017
• Agricultural Produce Processing Engineering •
Effects of extrusion stabilization on protein structure and functional properties of rice bran components

Changes in the microstructure and properties of the egg-break blade after boronisation and vanadizing
Development of automatic control system for natural drying and heat pump drying of kelp cascade drying
Zhu Ye, Jiang Tao, Zhang Xianguang, Hong Yang, Xing Jingzhu (298)
Effects of different temperature treatments on thermal stability and structure of red kidney bean protein
Process optimization of high temperature and short time hot air treatment to promote the callus formation of sweet potatoes
Liu Bangdi, Lyu Xiaolong, Wang Caixia, Sun Jie, Jiang Weibo (313)