

农业发展新视点

- 秸秆还田下灌溉方式对水稻产量的影响 赵宏亮 王 麒 曾宪楠 等(1)
黑龙江省各地市农机合作社总体绩效评价研究 乔金友 李金鸿 洪 魁 等(8)

理论研究与探讨

- 改进遗传算法在油茶果采摘机优化中的应用 宋莹莹 王福林 兰佳伟(14)
电动微耕机锂电池组热特性的研究 张 勉 陈 建 王 卓 等(19)
计算机图像识别在玉米生长模型中的应用 李 洁 滕振芳 吴伟刚(25)

设计制造

- 水肥一体化管控系统设计和实现 金永奎 盛斌科 孙 竹 等(29)
玉米苗带清茬施肥播种联合作业机研制 彭强吉 位国建 荣世春 等(36)
木薯收获机抖动链式筛土装置的设计与实验 刘炳先 廖宇兰 熊 佳 等(41)
新型农家肥果园自动施肥机的设计与试验 李 娟 何晓宁 王东伟 等(46)
遥控微耕机设计与试验 药林桃 曹晓林 董力洪 等(52)
辣椒起垄覆膜机的设计与试验研究 王 维 贺功民 王亚妮 等(57)
基于烟地残膜分布的捡拾机设计 梁长江 吴雪梅 陶佩杰 等(63)
好氧堆肥反应器内部在线监测控制系统设计 缪 宏 杨 强 戴大千 等(68)
链齿式残膜回收与驱动耙联合作业机的设计研究 张 佳 靳 伟 谢新亚 等(73)
播种机播种质量监测系统研究—基于嵌入式 Linux 和 ZigBee 王丽娟 李东琦(78)
基于迭代学习 PID 算法的苹果采摘机器人设计 陈明霞 张 寒 王晓文 等(83)

试验研究

- 基于 EDEM 的螺旋式排肥器排肥性能研究 薛 忠 赵 亮 王凤花 等(87)
取土器取土筒入土对土壤扰动影响的试验研究—基于离散元法 闫世风 何予鹏 庞超凡 等(96)
双变量排肥系统充肥性能分析与试验研究 赵学观 何亚凯 王松林 等(104)
大蒜切薹机的设计与试验研究 靳奉奎 罗 昕 胡 斌 等(111)
两种淀粉薯收获期茎秆机械特性的试验研究 刘崇林 赵胜雪 胡 军 等(117)
玉米梳脱摘穗果穗受力分析与高速摄影试验 张智龙 刘 威 侯加林 等(123)
蓝莓采摘实验台的设计与试验研究 郭艳玲 聂宏宇 李志鹏 等(130)
气吸滚筒式棉花精密排种器的设计与试验 康施为 倪向东 齐庆征 等(136)

无人机式毛叶苕子撒播装置设计和试验	张厚东 王伟 徐朋飞 等(142)
果园株间除草自动避障装置的设计与试验	朱站伟 汤智辉 何义川 等(147)
仿生多面体型几何结构镇压辊的设计与试验	张清珠 李默 张金波 等(154)
雷肯 1LFTT-550 液压翻转高速犁田间测试试验	胡灿 师广强 刘亚明 等(160)
红花悬浮与收集试验	郭辉 邢少康 郭伟宏 等(166)
水稻精量旱穴直播电驱排种设计与试验	曾山 刘赛男 张智刚 等(171)
方草捆收集车的设计与试验	孙文婷 王振华 郝兴玉 等(176)
纸筒式膜土两级分离回收机设计与试验	马澍轩 靳文停 黄德臣 等(181)

新技术应用

基于单片机的玉米变量施水播种机的设计	马波涛 张晋国(185)
排球运动规划在采摘机器人识别定位中的应用	马洪涛(191)
基于多传感器的秸秆打捆机计数监测系统	孙艺哲 谢煜 李士军 等(197)
采摘机械手末端控制系统的设计—基于 PLC 和 MCGS 组态软件	李慧 李丽(202)
采摘机器人执行末端控制系统设计—基于 PLC 三自由度控制	葛笑寒(207)
基于三维可视化技术的播种机结构设计	王社(212)
基于 DSP 的农田土壤信息采集器的改进设计	田二林 朱付保 张永霞 等(216)
农机调度管理系统设计—基于体育馆智慧物业管理系统	曹焕男 李洪梅 吕晶晶 等(220)
基于计算机视觉的芋头病害监测与识别	陈林琳 姜大庆 蔡银杰(224)
艺术外观渲染下的农机三维建模与模拟分析	聂婷(230)
收割机远程监测系统的设计—基于云平台数据挖掘并行算法	吴东林 张玉华(235)

环境与能源动力工程

农用拖拉机变速器箱体的结构优化	张廷浩 王昱 郑锐禹 等(240)
双电机功率分汇流纯电动拖拉机能量管理策略	黄天乐 陈树人 施爱平 等(246)
拖拉机复杂零件的逆向建模和数控加工仿真—基于 UG 软件	任艳霞 陈昌铎 丁刚 等(251)
嵌入式拖拉机视频监控系统设计—基于 DSP 和视频压缩编码	秦晓明(255)
拖拉机装配车间调度系统设计—基于粗糙集理论和大数据挖掘	郅芬香 王留芳 梁硕(260)

综述

精密玉米播种机数控加工核心算法控制研究	周黎(265)
---------------------	---------

Journal of Agricultural Mechanization Research

Vol.42 No.6 2020

Contents

New View of Agricultural Development

- Effect of Irrigation Methods on Rice Yield under Straw Returning to Field Zhao Hongliang et al.(1)
Research on the Performance Evaluation of Agricultural Machinery Cooperatives in Heilongjiang Province Qiao Jinyou et al.(8)

Theory Study and Discussion

- Application of Improved Genetic Algorithm in Optimization of Camellia Fruit Picking Machine Song Yingying et al.(14)
Research on Thermal Characteristics of Lithium Battery Pack of Electric Mini -tiller Zhang Mian et al.(19)
The Application of Computer Image Recognition in Model Building of Corn Growth Li Jie et al.(25)

Design and Manufacture

- Design and Implementation of Integrated Water and Fertilizer Management and Control System Jin Yongkui et al.(29)
Development of a Combined Operation Machine for Corn Seedlings With Clearing and Fertilization Peng Qiangji et al. (36)
Design and Experiment of Dither Chain Sieving Soil Device for Cassava Harvester Liu Bingxian et al.(41)
Design and Experiment of New Farmyard Manure Orchard Automatic Fertilizer Applicator Li Juan et al.(46)
Design and Test of Remote Control Micro Tillage Machine Yao Lintao et al.(52)
Design and Experiment at Research of Pepper Ridging and Laminating Machine Wang Wei et al.(57)
A New Pick-up Machine Design Based on Residual Film Distribution Liang Changjiang et al.(63)
Design of Internal Online Monitoring and Control System for Aerobic Composting Bioreactor Miu Hong et al.(68)
Design of Long Distance and Large Dip Material Belt Conveyor Zhang Jia et al.(73)
Research on Seeding Machine Quality Monitoring System —Based on Embedded Linux and ZigBee Wang Lijuan et al.(78)
Design of Apple Picking Robot Based on Iterative Learning PID Algorithm Chen Mingxia et al.(83)

Experiment and Research

- Study on the Performance of Spiral Fertilizer Distributor Based on EDEM Xue Zhong et al.(87)
Experimental Study on the Effect of Soil Disturbance Caused by Soil Borrowing of Earthmoving Device —Based on Discrete Element Method Yan Shifeng et al.(96)
Fertilizer Filling Performance Analysis and Experimental Study of Bivariate Fertilizer Drainage System Zhao Xueguan et al.(104)
Design and Experimental Research of Garlic Cutting Machine Jin Fengkui et al.(111)
Experimental Study on Mechanical Properties of Stalks during Harvest of Two Kinds of Starch Liu Chonglin et al.(117)
Mechanical Analysis and High -speed Photograph Experiment of Corn in Stripping Process Zhang Zhilong et al.(123)
Design and Experimental Study of Blueberry Picking Experiment Platform Guo Yanling et al.(130)
Design and Experiment of Pneumatic Cylinder Precision Seed -metering Device for Cotton Kang Shiwei et al.(136)

Design and Motion Analysis of the UAV Mao Leaf Pea Seeding Device	Zhang Houdong et al.(142)
Design and Experiment of Automatic Obstacle Avoidance Device for Weeding Between Plants	Zhu Zhanwei et al. (147)
Design and Experiment of Bionically Polyhedral Geometrically Press Rollers	Zhang Qingzhu et al.(154)
Field Testing Test of Reiken 1LFTT-550 Hydraulic Turn-over High Speed Plough	Hu Can et al.(160)
Safflower Suspension and Collection Test	Guo Hui et al. (166)
Design and Experiment of Rice Precision Dry Electric Drive Seeding	Zeng Shan et al. (171)
Design and Experiment of Rectangular Bale Accumulator	Sun Wenting et al.(176)
Design and Test of Two-stage Separation and Recovery Machine of Paper -tube Membrane Soil	Ma Liuxuan et al.(181)

Application of New Technology

Design of Corn Variable Application Planter Based on Single Chip Microcomputer	Ma Botao et al. (185)
Application of the Volleyball Motion Planning in the Recognition and Location of Picking Robot	Ma Hongtao (191)
Counting Supervision System of Straw Baler Based on Multi -sensor	Sun Yizhe et al.(197)
Design of Picking Manipulator Terminal Control System —Based on PLC and MCGS Configuration Software	Li Hui et al.(202)
Design of Control System for the Executing End of Picking Robot —Based on Three-Degree-of-Freedom Control of PLC	Ge Xiaohan(207)
Study of The Seeder Structure Design Based on Three -dimensional Visualization Technology	Wang She(212)
Improvement Design of Farmland Soil Information Collector Based on DSP	Tian Erlin et al.(216)
Design of Agricultural Machinery Dispatching Management System —Based on Intelligent Property Management System of Gymnasium	Cao Huannan et al.(220)
Monitoring and Identification of the Taro Disease Based on the Computer Vision	Chen Linlin et al.(224)
Three-dimensional Modeling and Simulation Analysis of Agricultural Machinery under Artistic Appearance Rendering	Nie Ting(230)
Design of Remote Monitoring System of Harvester —Based on Parallel Algorithms of Cloud Platform Data Mining	Wu Donglin et al.(235)

Environment and Energy Power Engineering

Structural Optimization of Transmission Box of Agrimotor	Zhang Tinghao et al.(240)
Dual Motor Power Split Flow Pure Electric Tractor Energy Management Strategy	Huang Tianle et al.(246)
Reverse Modeling and NC Machining Simulation of Complex Tractor Parts —Based on UG Software	Ren Yanxia et al.(251)
Design of Embedded Tractor Video Monitoring System —Based on DSP and Video Compression Coding	Qin Xiaoming(255)
Design of Tractor Assembly Shop Scheduling System—Based on Rough Set Theory and Big Data Mining	Zhi Fenxiang et al.(260)

Summary

Research on Core Algorithm Control of NC Machining of Precision Corn Planter	Zhou Li(265)
--	--------------