



中国核心期刊（遴选）数据库全文收录期刊
中国学术期刊综合评价数据库统计源期刊
中国学术期刊（光盘版）全文收录期刊
中文科技期刊数据库全文收录期刊

ISSN 1674-1161
CN 21-1559/S

农业科技与装备

AGRICULTURAL SCIENCE&TECHNOLOGY AND EQUIPMENT

2022年第4期

nongye keji yu zhuangbei



主管单位：辽宁省农业科学院
主办单位：辽宁省农业机械化研究所
协办单位：辽宁省农机学会 辽宁省农学会
辽宁省农业工程学会



农业科技与装备

NONGYE KEJI YU ZHUANGBEI

2022年第4期
(总第310期)
7月20日出版
双月刊
(1979年4月创刊)

主管单位 辽宁省农业科学院
主办单位 辽宁省农业机械化研究所
出版发行 农业科技与装备杂志社
印刷单位 沈阳市东实印刷厂
主编 高希君
副主编 刘欣 王帅
地址 沈阳市东陵路90号
邮政编码 110161
电话 024-88416286(传真)
电子邮箱 nykjyzb@163.com
网址 <http://www.lnsnjs.com.cn>
国内统一出版物号 CN 21-1559/S
国际标准连续出版物号 ISSN 1674-1161
发行范围 国内公开发行
订阅 全国各地邮局
邮发代号 8-211
每期定价 15.00元

声明 如需转载本刊文章及图片,请注明摘要
自《农业科技与装备》杂志,并寄样刊。

中国核心期刊(遴选)数据库全文收录期刊
中国学术期刊综合评价数据库统计源期刊

目次

品种与栽培

- 玉米新品种东单173的选育及制种技术 王东坡(01)
豇豆高产栽培技术 朱海艳(03)

土肥与环境

- 冬小麦肥料利用率试验初报 刘光胜(05)
不同外源试剂对盐胁迫黑果枸杞影响的研究进展 王金丹(07)
麻武村特色小镇建设土地利用问题研究 朱长春,郑艺璇,郑艺雯(09)

林学与植保

- 饲料中水分及营养物质含量对甜菜夜蛾的饲养影响 王春蕾(11)
草地贪夜蛾的为害与防治 马笑林(13)
国内外天敌昆虫产业化分析 宋树贤,于执国,王玲(15)

农业工程

- 水稻单株(穗)脱粒机的主要类型与特点
刘忠泽,孟斌,周伟艳,王宏亮,王彦刚(19)
运油式模温机降温系统设计研究 刘凤波,马胜宾(21)
一种板栗脱苞机的设计 周宇(24)
振动筛用双列调心滚子轴承的设计及选型
王建军,都本余,王璟林(26)
一种新型榛子去皮分拣机的设计 房强,胡星汝,周伟艳(28)
玉米根茬采样机挖掘铲参数设计 班春华(30)
水稻分蘖颗粒肥无人机投放电控系统设计 吕霞(32)
具有定量效果的畜牧养殖投料装置设计 刘书杰(34)
除杂装置控制系统设计 蔡婷婷,崔守娟(36)
彰武县节水灌溉水利工程建设探讨 吴宝叙(39)
气相色谱-质谱法测定土壤中1,2-二氯苯含量前处理方案择优
张亮(41)
辽宁地区稻谷空调控温储粮品质变化研究 杜松涛(43)

欢 迎 订 阅

中国学术期刊(光盘版)全文收录期刊
中文科技期刊数据库全文收录期刊

MU CI

- 生物传感器在食品安全检测中的应用 王婷婷(46)
乡村振兴背景下凌源市农产品冷链物流设施建设驱动因素初探及
发展建议 邓梟铭,宋双江,陈忠龙(48)
紫薯花色苷研究现况 张与格(52)
不同食品介质及乳化剂对甘薯淀粉糊化粘度特性影响研究
..... 陈梦雪,王璐,李飞(54)

技术推广

- 马铃薯滴灌覆膜栽培技术 陈良(58)
山东地区夏玉米播种技术探析 冯海波(60)
物联网技术在设施农业中的应用 陈云萍(62)
水利水电混凝土施工常见问题与质量控制 朱旭(64)
甘肃农业资源与水资源合理配置研究 张颖(66)
花生地膜栽培技术要点及推广策略 刘铁峰(68)

论坛交流

- 乡村振兴视域下农业产业发展的现实困境与对策
——以贵州黔南州某偏远农村为例 宋怡(70)
农业面源污染成因与防治策略 鲁旭鹏,陈柏,李眷(72)
产教融合背景下高职院校服务乡村振兴路径研究 黄永洁,邵士凤(74)
基于乡村振兴的辽宁农村实用人才培育路径 王琪,赵真(76)
食品专业研究生培养中课程思政与案例教学融合探索
..... 牛广财,魏文毅,李艳青,王长远,唐彦君(79)
辽宁省食用菌人才体系队伍建设探讨 燕炳辰(81)
甘肃省区域农业经济发展差异空间格局分析 范思敏(83)
现代食品检测技术课程教学改革探索 邓健康,张辉(86)
基于粮油科技发展规划的教学实践探索 金锋(88)
百万扩招背景下“1+X”证书制度实施路径
..... 王忠楠,水东莉,石佳,赵竹,于丽颖(90)

AGRICULTURAL SCIENCE& TECHNOLOGY AND EQUIPMENT

NO.4,2022
(Total NO.310)
July 20
Bimonthly
(Started in April 1979)

Administered by

Liaoning Academy of Agricultural
Sciences

Sponsored by

Liaoning Province Agricultural
Mechanization Institute

Published and Distributed by

Journal of Agricultural S&T and
Equipment

Printed by

Shenyang DongShi Printing House

Editor in Chief

GAO Xijun

Ddputy Editor in Chief

LIU Xin,WANG Shuai

Address

No.90,Dongling Road,Shenyang 110161

Telephone(Fax)

024-88416286

E-mail

nykjyzb@163.com

<http://www.lnsnjs.com.cn>

CN 21-1559/S

ISSN 1674-1161

For reproduction of any articles and pictures
from AGRICULTURAL SCIENCE&TECHNOLOGY
AND EQUIPMENT,please indicate the
source and send us a sample book.

欢 迎 赐 稿



Contents

Variety and Cultivation

- Breeding and Seed Production of A New Maize Variety Dongdan 173 WANG Dongpo(01)
High-yield Cultivation Techniques of Cowpea ZHU Haiyan(03)

Soil-fertilizer and Environment

- Preliminary Report on Fertilizer Utilization Rate of Winter Wheat LIU Guangsheng(05)
Research Progress on Effects of Different Exogenous Reagents on Lycium Ruthenicum under Salt Stress WANG Jindan(07)
Study on Land Use of Characteristic Town Construction in Mawu Village ZHU Changchun, ZHENG Yixuan, ZHENG Yiwen(09)

Forestry and Plant Protection

- Effect of Water and Nutrient Content in Feed on the Feeding of Beet Armyworm WANG Chunlei(11)
Damage and Control of Spodoptera Frugiperda MA Xiaolin(13)
Analysis on the Industrialization of Natural Enemy Insect at Home and Abroad SONG Shuxian, YU Zhiguo, WANG Ling(15)

Agricultural Engineering

- Main Types and Characteristics of Rice Single (Ear) Plant Thresher LIU Zhongze, MENG Bin, ZHOU Weiyuan, WANG Hongliang, WANG Yangang(19)
Research on the Design on Cooling System of Oil Transport Type Mould Temperature Controller LIU Fengbo, MA Shengbin(21)
Design of A Chinese Chestnut Shell Stripping Machine ZHOU Yu(24)
Design and Selection of Double-row Self-aligning Roller Bearing for Vibration Screen WANG Jianjun, DU Benyu, WANG Jinglin(26)
Design of A New Type of Hazelnut Peeling Sorter FANG Qiang, HU Xingru, ZHOU Weiyuan(28)
Design of Digging Shovel Parameters of Corn Root Stubble Sampling Machine BAN Chunhua(30)
Design of Electric Control System for Rice Tiller Granule Fertilizer Delivery by UAV LÜ Xia(32)
Design of Feeding Device for Animal Husbandry Breeding with Quantitative Effect LIU Shujie(34)
Design of Control System for Impurities Removal Device CAI Tingting, CUI Shoujuan(36)
Discussion on the Construction of Water-saving Irrigation Conservancy Project in Zhangwu County WU Baochai(39)
Pretreatment Scheme Selection for Determination of 1, 2-Dichlorobenzene Content in Soil by GC-MS ZHANG Liang(41)
Study on Quality Change of Paddy Stored with Air-conditioning for Controlling Temperature Grain Storage in Liaoning Region DU Songtao(43)
Application of Biosensor in Food Safety Detection WANG Tingting(46)
Preliminary Study on Driving Factors and Development Suggestions of Agricultural Cold Chain Logistics Facilities Construction in Lingyuan City Under The Background of Rural Revitalization DENG Xiaoming, SONG Shuangjiang, CHEN Zhonglong(48)
Research Status of Anthocyanin of Purple Potato ZHANG Yuge(52)
Study on the Gelatinizing Viscosity Characteristics of Sweet Potato Starch by Different Food Media and Emulsifiers CHEN Mengxue, WANG Lu, LI Fei(54)

Technology Extension

- Cultivation Technology of Potato with Film Mulching under Drip Irrigation CHEN Liang(58)
Analysis on Sowing Technology of Summer Corn in Shandong Province FENG Haibo(60)
Application of Internet of Things Technology in Facility Agriculture CHEN Yunping(62)
Common Problems and Quality Control of Water Conservancy and Hydropower Concrete Construction ZHU Xu(64)
Research on the Rational Allocation of Agricultural Resources and Water Resources in Gansu Province ZHANG Ying(66)
Key Points and Promotion Strategies of Peanut Mulching Film Cultivation Technology LIU Tiefeng(68)

Forum and Communication

- Practical Difficulties and Countermeasures of Agricultural Industry Development under the Vision of Rural Revitalization
——Take A Remote Countryside in Qiannan Prefecture, Guizhou Province as An Example SONG Yi(70)
Causes and Control Strategies of Agricultural Non-Point Source Pollution LU Xupeng, CHEN Bai, LI Juan(72)
Research on the Path of Higher Vocational Colleges Serving Rural Revitalization under the Background of Integration of Industry and Education HUANG Yongjie, SHAO Shifeng(74)
Cultivation Path of Rural Practical Talents in Liaoning Province based on Rural Revitalization WANG Qi, ZHAO Zhen(76)
Exploration on the Integration of Curriculum Ideological and Political Education and Case Teaching in the Cultivation of Postgraduate Students of Food Specialty NIU Guangcai, WEI Wenyi, LI Yanqing, WANG Changyuan, TANG Yanjun(79)
Discussion on the Team Construction of Edible Fungus Talent System in Liaoning Province YAN Bingchen(81)
Analysis of The Differential Spatial Pattern of Regional Agricultural Economic Development in Gansu Province FAN Simin(83)
Exploration of the Teaching Reform of Modern Food Testing Technology Course DENG Jiankang, ZHANG Hui(86)
Exploration of Teaching Practice Based on the Development Planning of Grain and Oil Science and Technology JIN Feng(88)
Implementation Path of "1+X" Certificate System under the Background of Millions of Enrollment Expansion WANG Zhongnan, SHUI Dongli, SHI Jia, ZHAO Zhu, YU Liying(90)

参加期刊编校无差错承诺活动



农业科技与装备
NONGYE KEJI YU ZHUANGBEI
2022年第4期
(总第310期)
7月20日出版
双月刊，1979年4月创刊
<http://www.lnsnjs.com.cn>
E-mail:nykjyzb@163.com

ISSN 1674-1161
CN 21-1559/S

邮发代号：8-211 国内定价：15.00元