



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

2018年第6期

nongye keji yu zhuangbei



ISSN 1674-1161

11>
9 771674 116083

主管单位：辽宁省农村经济委员会
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

2018年第6期
(总第288期)
11月20日出版
双月刊
(1979年4月创刊)

主管单位 辽宁省农村经济委员会
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 nykjzb@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
明 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

- 不同外源性试剂胁迫下黄芪种子萌发的影响 于明艳(01)
高粱高产高效栽培技术探讨 张曼丽(03)

农业工程

- 小型牧草收割机的设计 陈鹏德(06)
犊牛饲喂装置的设计及参数计算 王玄,李源源,侯云涛(09)
基于单片机的智能水果采摘机器人 陈金华,孙雪蕾(12)
新型水体透明度测量装置的设计 张峻齐,殷飞,李锦锦,王洪伟,景其益(14)
水稻秸秆还田高产耕层构建试验初报 王福义(16)
2BD水稻种膜覆膜直播机性能试验 王帅(18)
水稻秧盘高速播种配套技术的发展与分析 程晋,王福义(20)
基于模式匹配算法的转基因大豆DNA快速检测方法 杨萍,王海清,王宇,岳江涛(22)

- 基于用电信息采集系统的配变台区异常线损分析与治理 丁文龙,常静(25)
辽河治理与实施“河长制”对农业发展影响研究 吴林风(28)
何首乌二苯乙烯苷类成分研究进展 张雪(31)
党参多糖提取工艺研究进展 樊志强(33)
黑米发芽的工艺条件研究 付欣,鲁明,王小鹤,于森(35)
食品分析用苯甲酸溶液标准样品配制过程中不确定度的评定 赵卉,岑琴,胡梦坤(40)
外源物诱导花生及其制品中白藜芦醇含量变化的研究进展 王小鹤,于森,鲁明,迟吉捷(42)
大豆肽最佳水解条件确定及生产工艺研究 董砚博(44)

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

- 不同加工方法对当归有效成分含量的影响 闫丽丽(46)
UPLC 法同时测定复配甜味剂中安赛蜜、糖精钠和阿斯巴甜的研究
..... 岑 琴,赵 卉,胡梦坤(49)
黄瓜咀嚼片粉末直接压片法工艺研究
..... 岳凤丽,齐子和,徐兆伟,张 鲲,迟晓君(51)
灵芝液体深层发酵的影响因素研究进展 任 奕(55)
羊栖菜多糖分离工艺的研究 高坛玉,刘思渊,林国荣(57)
酸奶生产加工研究进展 叶春苗(62)

技术推广

- 六盘山区云杉育苗关键技术 杨生文(64)
杂粮产品的开发研究现状 相玉秀,祝婧楠,郭玲玲(66)
节水灌溉技术在设施农业中的应用 张振振(68)
玉米节水灌溉覆膜播种技术在辽宁地区的应用 王家骥(70)

论坛交流

- 现代学徒制下专业教师实践锻炼与课程改革的探析
..... 吴存兵,董 静,张栋成(72)
基于工作过程系统化的食品质量与安全专业实践教学体系构建
..... 郭玲玲,相玉秀,吴宪玲(75)
黔南地区新型职业农民从业素质提升研究 何 力(77)
故障树分析法在高职数控车床实践课程教学中的应用 刘海庆(79)
计算机网络信息管理及安全防护研究 于 颖(83)
微观茶文化产业市场化进程的制度困境与梳理
..... 金 锋,李明露,金 燕(85)
2018 年总目次 (1-6)

AGRICULTURAL SCIENCE& TECHNOLOGY AND EQUIPMENT

NO.6,2018
(Total NO.288)
November 20
Bimonthly
(Started in April 1979)

Administered by

Liaoning Province Rural Economy
Committee

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

nykjzb@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 赠 稿



Contents

Variety and Cultivation

- Effects of Different Exogenous Reagents on Seed Germination of Astragalus YU Mingyan(01)
Discussion on cultivation technology of sorghum with high yield and high efficiency ZHANG Manli(03)

Agricultural Engineering

- Design of Small Forage Harvester CHEN Pengde(06)
Design and Parameter Calculation of Calf Feeding Device WANG Xuan, LI Yuanyuan, HOU Yuntao(09)
Intelligent Fruit-picking Robot Based on Single Chip CHEN Jinhua, SUN Xuelei(12)
Design of a New Measuring Device of Water Transparency ZHANG Junqi, YIN Fei, LI Jinjin, WANG Hongwei, JING Qiyi(14)
Preliminary Report on High Yield Plough LayerConstruction of Rice Straw Returned to Field WANG Fuyi(16)
Performance Test of Film MulchingDirect Seeding Machinefor 2BD Rice Seed WANG Shuai(18)
Development and Analysis of High Speed Seeding Supporting Technology for Rice Seedling Tray CHENG Jin, WANG Fuyi(20)
A Rapid DNA Detection Method for Transgenic Soybean Based on Pattern Matching Algorithm YANG Ping, WANG Haiqing, WANG Yu, YU Jiangtao(22)
Analysis and Treatment of Abnormal Line Loss in Electrical Transformer District Based on Electricity Information Collection System DING Wenlong, CHANG Jing(25)
Study on the Effect of River Regulation and Implementation of “River Length System” on Agricultural Development ... WU Linfeng(28)
Research Progress on Stilbeneglycosid in Polygonum Multiflorum Thumb ZHANG Xue(31)
Research Progress on Extraction Technology of Radix Codonopsis Polysaccharides FAN Zhiqiang(33)
Study on the Technology Condition of Black Rice Germination FU Xin, LU Ming, WANG Xiaohe, YU Miao(35)
The Evaluation of Uncertainty in Preparation of Benzoic Acid Liquor Standard Sample forFood Analysis ZHAO Hui, CEN Qin, HU Mengkun(40)
Research Progress on Exogenous Inducement of Resveratrol Content in Peanut and Its Products WANG Xiaohe, YU Miao, LU Ming, CHI Jijie(42)
Study on Determination of Optimum Hydrolysis Conditions and Production Process of Soybean Peptide DONG Yanbo(44)
Research on the Effect of Different Processing Method on Content of Active Ingredient of Angelicae Sinensis Radix YAN Lili(46)
Study on UPLC Method for Simultaneous Determination of Aspartame, Saccharin Sodium and Aspartame in Compound Sweeteners CEN Qin, ZHAO Hui, HU Mengkun(49)
Technology Research of Cucumber Chewable Tablet with Direct Compression Method YUE Fengli, QI Zihe, XU Zhanwei, ZHANG Dun, CHI Xiaojun(51)
Research Progress on the Effecting Factors of Liquid Deep Fermentation of Ganoderma Lucidum REN Yi(55)
Study on Separation of Polysaccharides from Hizikia Fusiforme GAO Tanyu, LUI Siyuan, LIN Guorong(57)
Research Progress on Yogurt Production and Processing YE Chunmiao(62)

Technology Extension

- Key Technology of Spruce Seedling in Liupan Mountain Area YANG Shengwen(64)
Development and Research Status of Coarse Cereals XIANG Yuxiu, GUO Lingling, ZHU Jingnan(66)
Application of Water-sacing Irrigation Technique in Facility Agriculture ZHANG Zhenzhen(68)
Application of water-saving Irrigation and Mulching Seeding Technology of Maize in Liaoning Province WANG Jiaji(70)

Forum and Communication

- Exploration of Professional Teachers' Practice and CurriculumReform under the Modern Apprenticeship WU Cunbing, DONG Jing, ZHANG Dongcheng(72)
Construction of Practical Teaching System of Food Quality and Safety Specialty Based on Systematization of Work Process GUO Lingling, XIANG Yuxiu, WU Xianling(75)
Study on improvement of employment quality of new-type professional farmers in southern guizhou HE Li(77)
Application of Fault Tree Analysis Method in Practical Course Teaching of NC Lathe in Higher Vocational Colleges ... LIU Haiqing(79)
Research on Computer Network Information Management and Safety Protection YU Ying(83)
Institutional Dilemma and Combing of the Market Process of Microcosmic Tea Culture Industry ... JIN Feng, LI Minglu, JIN Yan(85)
2018 Total Contents (1-6)