

# 种子

月刊

SEED

ISSN 1001-4705  
CN 52-1066/S



## 种子专业代表性期刊

第二届全国期刊奖百种重点期刊  
全国中文核心期刊  
中国科技核心期刊  
中国农业核心期刊  
中国期刊方阵双效期刊  
全国优秀科技期刊  
第一届贵州省优秀期刊奖

中国核心期刊(遴选)数据库  
中国学术期刊(光盘版)(CAJ-CD)  
日本科学技术振兴机构(中国)数据库(JST)  
中国期刊全文数据库(CJFD)  
中国学术期刊综合评价数据库(CAJCED)  
中国生物学文献数据中心数据库  
中国科技论文统计源期刊  
中国科学引文数据库(CSCD)  
重庆维普中文科技期刊数据库

2021



8月 第40卷

主办：贵州农业职业学院 贵州省种子管理站

万方数据

种子

2021年

第八期

总第344期

SEED

2021

No. 8

Total

No. 344

# 种子

(ZHONG ZI)

第 40 卷 第 8 期 2021 年 8 月

月刊(1981 年创刊 总第 344 期)

## 目次

### 研究报告

不同收获期对小麦种子活力及物理性状的影响

张艳芳,吴凯铭,刘光耀,马守才..... (1)

基于 GC-MS 的玉米萌发过程代谢组学研究

王玮棋,牟美睿,杨仁杰,刘海学..... (8)

野大麦的分子核型分析

冯娜,李景环..... (15)

宁夏春小麦品种宁春 27 号成株期抗条锈性遗传分析

白海波,惠建,吕学莲,马斯霜,王敬东,沈文娟,李树华..... (20)

不同基因型冬小麦种质资源的遗传多样性研究

郭鹏燕,任杰成,赵吉平,权宝全,许璠,岳茂林..... (25)

杂交谷子重组自交系群体农艺性状分析

赵芳,张晓磊,魏玮,赵治海,王晓明,宋国亮..... (30)

黄淮海 50 份大豆种质资源 SSR 遗传多样性分析

李琮,耿臻,杨青春,舒文涛,李金花,常世豪,张东辉,张保亮..... (39)

贵州地方高粱种质资源遗传多样性分析

胡小兰,任明见,曾庆鸿,申涛,邱红波..... (45)

糖浸种对盐胁迫玉米种子萌发和幼苗生长的影响

张成冉,徐广海,宋朝玉,伊祖涛,江绪文,孙鹏,张海艳..... (51)

贵紫麦 1 号紫粒性状的遗传规律及基因定位

董亚兵,何方,彭亚姝,徐如宏,钱小康,任明见..... (57)

### 综述

多花黄精种子化学成分及萌发的研究进展

廖发娇,伍林涛..... (64)

资源与利用

97 份大麦种质资源农艺性状分析与评价  
牛小霞,柳小宁,潘永东,包奇军,张华瑜,赵 锋 ..... (68)

33 份簇生辣椒种质机械采收指标综合评价  
何建文,吴 迪,付文婷,黄冬福,范高领,詹永发,吴康云 ..... (73)

紫苏种质资源表型多样性研究  
肖 宇,魏国江,王晓飞,刘淑霞,孙 力,关向军,徐海军 ..... (78)

短尾杜鹃群落结构及多样性研究  
郝 磊,龙海燕,戴晓勇,邓伦秀 ..... (85)

问题探讨

不同处理方法对海南红豆种子萌发及幼苗生长的影响  
曹小林,郝清玉 ..... (95)

外源 NO 对铝胁迫下萝卜种子萌发及幼苗生理特性的影响  
雷 阳,刘 钊,王生武,白 扬,魏 晔 ..... (100)

涉案罂粟种子微形态及其活力特征研究  
刘大伟,应耿迪,赵静怡,谢春平 ..... (106)

6 个新选玉米自交系的配合力分析  
龙 风,李承波,彭忠华 ..... (111)

引发对自然老化甜菜种子活力及幼苗生理特性的影响  
荆文旭,魏 磊,万 雪,石鑫鑫,郭 明,邢旭明,史树德 ..... (116)

贵州喀斯特区域马铃薯种薯生产重金属安全性初探  
董颖革,曹绍书,粟彩芸,王 瑶,罗 充 ..... (122)

红托竹荪液体菌种发酵条件配方优化研究  
刘 锡,葛芊芊,罗 倩,王 莹,向 准,刘忠玄,杨澍雨 ..... (127)

品种选育研究

远缘杂交转育抗烟草花叶病 N 基因同源基因片段的初步研究  
焦芳婵,童治军,方敦煌,肖炳光,袁欣婕,陈学军,李永平 ..... (132)

应用技术

贵州作物种质资源信息管理平台构建与应用  
李 欢,谭金玉,陈惠查,霍可以,黎小冰,桑海伟,阮仁超 ..... (136)

响应面法优化紫丁香愈伤组织诱导条件及防褐化研究  
郭彩珍 ..... (141)

经验交流

甘肃酒泉制种基地可持续发展的探讨  
马文慧,赵 帅 ..... (146)

# SEED

Vol.40 No.8 August 2021

Monthly(Total No.344)

## CONTENTS

### Research Reports

Effects of different harvesting time on vigor and physical characteristics of wheat seeds

..... ZHANG Yanfang, WU Kaiming, LIU Guangyao, MA Shoucai (1)

Study on metabolomics during maize germination process based on GC-MS

..... WANG Weiqi, MU Meirui, YANG Renjie, LIU Haixue (8)

Molecular karyotype analysis of wild *Hordeum brevisubulatum*

..... FENG Na, LI Jinghuan (15)

Genetic analysis of stripe rust resistance of spring wheat variety Ningchun 27 in Ningxia at Adult-plant stage

..... BAI Haibo, HUI Jian, LÜ Xuelian, MA Sishuang, WANG Jingdong, SHEN Wenjuan, LI Shuhua (20)

Study on genetic diversity of winter wheat germplasm resources with different genotypes

..... GUO Pengyan, REN Jiecheng, ZHAO Jiping, QUAN Baoquan, XU Ying, YUE Maolin (25)

Analysis of agronomic traits of recombinant inbred lines of hybrid millet

..... ZHAO Fang, ZHANG Xiaolei, WEI Wei, ZHAO Zhihai, WANG Xiaoming, SONG Guoliang (30)

Genetic diversity analysis of 50 soybean germplasms in huanghuaihai based on SSR

..... LI Qiong, GENG Zhen, YANG Qingchun, SU Wentao, LI Jinhua,  
CHANG Shihao, ZHANG Donghui, ZHANG Baoliang (39)

Genetic diversity analysis of sorghum germplasm resources in Guizhou province

..... HU Xiaolan, REN Mingjian, ZENG Qinghong, SHEN Tao, QIU Hongbo (45)

Effects of sugar immersion on seed germination and seedling growth of maize under salt stress

..... ZHANG Chengran, XU Guanghai, SONG Chaoyu, YI Zutao, JIANG Xuwen, SUN Peng, ZHANG Haiyan (51)

Genetic development and gene mapping of purple grain traits in Guizimai 1

..... DONG Yabing, HE Fang, PENG Yashu, XU Ruhong, QIAN Xiaokang, REN Mingjian (57)

### Review

Advances in studies on chemical constituents and germination of *Polygonatum cyrtoneura* seeds

..... LIAO Fajiao<sup>1</sup>, WU Lintao (64)

### Resources and Utilization

Analysis and evaluation of agronomic traits of 97 barley germplasm resources

..... NIU Xiaoxia, LIU Xiaoning, PAN Yongdong, BAO Qijun, ZHANG Huayu, ZHAO Feng (68)

Comprehensive evaluation of mechanical harvesting indexes of 33 clustered pepper germplasms

..... HE Jianwen, WU Di, FU Wenting, HUANG Dongfu, FAN Gaoling, ZHAN Yongfa, WU Kangyun (73)

Phenotypic diversity of *Perilla frutescens* germplasms

..... XIAO Yu, WEI Guojiang, WANG Xiaofei, LIU Shuxia, SUN Li, GUAN Xiangjun, XU Haijun (78)

Study on community structure and diversity of *Rhododendron brevicaudatum*

..... HAO Lei, LONG Haiyan, DAI Xiaoyong, DENG Lunxiu (85)

## Discussion

Effects of different treatments on seed germination and seedling growth of *Ormosia pinnata* from Hainan

..... CAO Xiaolin, HAO Qingyu (95)

Effects of exogenous NO on seed germination and seedling physiological characteristics of radish under aluminum stress

..... LEI Yang, LIU Zhao, WANG Shengwu, BAI Yang, WEI Ye (100)

Study on micromorphology and vitality characteristics of Illegal *Papaver somniferum* seeds

..... LIU Dawei, YING Gengdi, ZHAO Jingyi, XIE Chunping (106)

Combining ability analysis of six newly selected maize inbred lines

..... LONG Feng<sup>1</sup>, LI Chengbo<sup>2</sup>, PENG Zhonghua (111)

Effects of priming on seed vigor and seedling physiological characteristics of naturally aging sugar beet

..... JING Wenxu, WEI Lei, WAN Xue, SHI Xinxin, GUO Ming, XING Xuming, SHI Shude (116)

Preliminary study on heavy metals safety of potato production in karst area

..... DONG Yingping<sup>1,2</sup>, CAO Shaoshu<sup>3</sup>, SU Caiyun<sup>1</sup>, WANG Yao<sup>1</sup>, LUO Chong (122)

Study on optimization of fermentation conditions for liquid strains of *Dictyophora rubrovolva*

..... LIU Xi, GE Cuicui, LUO Qian, WANG Ying, XIANG Zhun, LIU Zhongxuan, YANG Shuyu (127)

## Varieties Breeding and Research

Preliminary study on *N Gene* homologous gene fragment of resistance to tobacco mosaic disease in transbreeding based on distant hybridization

.....

JIAO Fangchan, TONG Zhijun, FANG Dunhuang, XIAO Bingguang, YUAN Xinjie, CHEN Xuejun, LI Yongping (132)

## Application Technologies

Construction and application of Guizhou crop germplasms information management platform

..... LI Huan, TAN Jinyu, CHEN Huicha, HUO Keyi, LI Xiaobin, SANG Haiwei, RUAN Renchao (136)

Optimization of callus induction conditions and Anti-browning of *Syringa oblata* by response surface methodology

..... GUO Caizhen (141)

## Exchange of Experience

Discussion on sustainable development of jiuquan seed production base in Gansu province

..... MA Wenhui, ZHAO Shuai (146)