

江苏农业科学

第 46 卷 第 5 期 2018 年 3 月 5 日

目 次

●专论与综述

- 农业龙头企业社会责任履行行为表现研究综述与展望 徐雪高,许卫健,张 振,等(1)
- 作物分子标记辅助选择育种的现状与展望 王亚琦,孙子洪,郑 峥,等(6)
- 国内外花生机械化收获发展概况分析 张 冲,胡志超,邱 添,等(13)
- 秋水仙素诱导丹参多倍体研究进展 白英豪,张晓丽,李明军(18)
- 秸秆还田对农田环境多重影响研究进展 陈 浩,张秀英,郝兴顺,等(21)
- 无毛猪种质资源研究现状与展望 胡慧艳,贾 青,刘 津,等(25)

●生物技术

- 陆地棉 *GhWOX4* 转录因子的克隆与生物信息学分析 杨卫军,吕有军,赵兰杰,等(28)
- 枇杷属若干野生种叶片愈伤组织诱导和再分化 刘义存,黄天启,林顺权(32)
- 地衣芽孢杆菌 B-1 和鞘氨醇单胞菌 SC-1 原生质体制备与再生条件的研究
..... 陈切希,简志青,贾冬英,等(36)
- MaCaM* 和 *MaCAMTA3* 基因在热处理诱导香蕉抗冷性中的作用 王海波,李 璐,苏新国,等(40)
- MLL 启动子驱动 *SST* 基因转化甜菜的抗旱性分析 梁文洁,张 丽,郭新勇,等(43)
- 利用高通量测序法分析中国北方葡萄园土壤细菌的多样性 宋雪洁,刘 波,刘天明(48)

●遗传育种与耕作栽培

- 抽穗扬花期低温强度对水稻生长发育的影响与模拟 高益波,景元书,刘明璐,等(53)
- 蛙稻生态种养模式对土壤微生物特性的影响 郭文啸,赵 琦,朱元宏,等(57)
- 三系杂交中籼稻新组合茎优 1393 的选育及栽培技术 朱国永,严国红,王合勤,等(61)
- 春季湿渍害对油菜产量结构的影响与减产效应 刘凯文,苏荣瑞,潘建成,等(63)
- 国审两系杂交籼稻盐两优 2208 的选育研究 王爱民,姚立生,严国红,等(66)
- 腐殖酸耦合性对河套灌区盐碱地向日葵生长及光合特性的影响 郝水源,李林虎,苏晓东,等(69)
- 油后直播杂交稻上 3 叶性状与单穗粒质量的相关和通径分析 张荣萍,陶诗顺,胥伟秋,等(72)
- 烟草高钾新品系的遗传效应分析 戴林建,黄德文,钟 军,等(76)
- 不同施肥时期对水稻机插秧苗素质的影响 邵文奇,纪 力,钟 平,等(81)
- 不同生物炭配比育苗基质对烟苗素质的影响 刘光亮,王永利,吕国新,等(84)

●植物保护

- 枸杞木虱寄主选择性与寄主物理性状及次生物质的关系 刘晓丽,李 锋,李晓龙,等(88)
- 大豆食心虫高毒力球孢白僵菌菌株的筛选 陶淑霞,陆子慧(91)
- 哈茨木霉菌株 WY-1 对番茄的促生防病效果 曲 薇,伍 森,王旭东,等(94)

大蒜内生菌的分离及拮抗菌株的筛选与鉴定	李乐溪,李 丹,张 亮,等(97)
---------------------------	-------------------

●园艺与林学

梨品种果实大小的发育动态	田路明,董星光,曹玉芬,等(102)
基于主成分分析的杏李砧木耐盐性综合评价	卢明艳,潘 越,安 鹭,等(105)
二倍体与四倍体黄毛草莓的光合特性	徐苏婷,陈露茜,李钧敏(110)
油用牡丹凤丹光合特性	张志浩,杨玉珍,李 娟,等(113)
红枫湖樱花花粉超低温保存探究	宋常美,文晓鹏,李庆宏(117)
东京野茉莉花芽发育过程中的生理特性	徐丽萍,喻方圆(120)
黄瓜和草菇轮作对后茬黄瓜根围细菌多样性及土壤酶活性的影响	杨 威,闫海霞,刘廷武,等(124)
土壤镉污染下生物炭对白菜生长及植株镉浓度的影响	陈 森,张子谦,李 婧,等(129)
野生东北草莓与栽培草莓光合特性的比较	马久蓉,高 松,闫 明,等(132)
河北省葡萄施肥现状及节能减排潜力分析	马振朝,王嘉莹,庞新宇,等(135)
桃叶卫矛茎尖超低温保存及再生	李 享,苏 晴,宋 红(140)

●畜牧兽医与水产蚕桑

猪乳外胞体总 miRNAUnit 对猪繁殖与呼吸综合征病毒复制抑制的研究	蔡锦顺,关立增,娄鞍钢,等(144)
玉米赤霉烯酮对大鼠睾丸支持细胞凋亡蛋白释放的影响及 NAC 的保护效应	薛画眉,郭宏元,王光光,等(147)
不同养殖方式对樱桃谷商品肉鸭生长和屠宰性能的影响	王利刚,杨晓志,孙国波,等(151)
pH 值对葛仙米生理的影响	刘树文,罗丽丽(153)
仔猪传染性胸膜肺炎母源抗体消长规律的研究	张 艳,刘海隆,林哲敏,等(156)

●贮藏加工与检测分析

基于机器视觉的核桃仁分级方法	蔡 建,周 军,史建新,等(158)
7 种可食藻提取物对食品致病菌的抑菌效果	罗爱国,冯 佳,胡变芳,等(162)
吸氧剂处理对核桃仁品质的影响	马雪梅,罗淑芬,胡花丽,等(167)

●农业工程与信息技术

基于自适应萤火虫的农业传感网络均衡分簇算法	袁旭华,惠小静(172)
犊牛饲喂常乳加工与供给系统设计与试验	戚江涛,蒙贺伟,坎 杂,等(177)
单人电动茶叶采摘机主要机构设计	刘 彪,肖宏儒(180)
基于深度学习的小麦蚜虫预测预警	王秀美,牟少敏,邹宗峰,等(183)
基于改进人工鱼群算法的低压输水管网优化设计	朱成立,柳智鹏,叶素飞,等(187)
基于众包的农业大数据采集平台构建	顾戈琦,李 瑾(191)
基于 Ontology 的农业科学领域知识库构建	苏玉宁,姜 艺,陈贺胜,等(194)
多功能农用机器人路径规划的多种优化算法	王 辉,王景良,朱龙彪,等(199)
基于时空关联性的温室环境多传感器数据融合	周金生,王纪章,贺 通,等(203)
基于 Java 的马铃薯窖藏环境监控系统的设计与实现	刘瑞瑞,王福平(208)
基于灰度极限学习机的粮食产量预测	樊 超,曹培格,郭亚菲,等(212)
农作物区域中多媒体传感网络智能监测架构的研究与设计	任 华(215)

全自动植保无人机含障不规则区域的航迹规划算法 金泽选,吴开华,王 朔,等(220)

●资源与环境

太湖污染源调查与分析 蔡金傍,孙 旭,苏良湖,等(224)

准噶尔盆地南缘 2 种禾本科植物根鞘土壤理化性质、微生物数量及土壤酶活性研究
..... 任美霖,王绍明,张 霞,等(227)

硅藻土改性木质陶瓷的制备及对四环素的吸附性能 朱灵峰,谷一鸣,高如琴,等(232)

小陇山国家级自然保护区水楸种群结构和空间分布格局分析 赵欣鑫,巨天珍,王 爽,等(235)

平顶山矿区丘陵坡地土壤健康评价 楚纯洁,周金凤,杜越天(240)

基于 DEA 模型和 Malmquist 生产效率指数的我国省际土地利用生态效率时空演变
..... 潘润秋,易子豪,张 琴(244)

凌河流域不同时期水环境质量评价 王 琦,陈秋颖,王 艳,等(250)

新媒体背景下的农村生态环境治理途径 毛阳南(255)

基于解构模型的 2000—2014 年甘肃省碳排放核算与分析 张治会,李全新(257)

硅藻土改性木质陶瓷的制备及其对酸性橙 II 的超声吸附行为 朱灵峰,孙 倩,高如琴,等(261)

低碳视角下土地利用系统健康评价——以新疆乌鲁木齐市为例 马文娟,蒲春玲,陈前利,等(264)

湖北省耕地多功能变化及障碍因素诊断 赵志尚,胡伟艳,魏安奇(268)

江苏省苏南地区地下水环境质量评价及污染指标分析——以江苏省太仓市为例 梅林林,朱大威(272)

安徽省一季稻抽穗开花期高温热害分布规律 郭建茂,李淑婷,谢晓燕,等(275)

北京市农用地 N₂O 排放估算——基于区域氮循环 IAP - N 模型 毛国华,马文林,康静文(280)

利用农业废弃物对青霉菌进行固态发酵生产纤维素酶 訾 慧,白洪志,王 惠,等(285)

丙烯酸 - 膨润土保水剂的制备及其保水效果研究 李 备,韩占涛,张发旺,等(289)

●农业经济与管理

社员与农民资金互助社的股权关系异化及形成机理 陈东平,宋文华,丁力人(293)

我国都市农业旅游的区域差异与经济发展研究——基于面板模型分析法 雷俐丽(297)

基于因子分析的农业科技园区创新能力评价——以安徽省国家级园区为例 夏岩磊(303)

茶叶企业的 O2O 营销模式探析..... 刘路星,郑蓉蓉(308)

基于特色农业产业的区域品牌构建——以“丽水山耕”为例 潘 超(312)

海南农业生态旅游的移动电子商务策略 蔡 舒(316)

统筹城乡发展视域下农民住房产权制度改革的实践与思考——以浙江省温州市为例
..... 施端银,张玲萍(320)

“互联网 +”背景下农村电子商务发展路径探析——以陕西省为例 张 鸿,刘修征(324)

乡村旅游精准扶贫的内涵解读与路径安排 周 霄(329)

基于产业共生视角的农业与物流业协同发展研究 戎陆庆,魏 锋(332)

中国省域生态经济系统耦合协调发展时空分异 刘德强,沙海江,吴成亮(338)

丘陵区农村居民点空间格局特征及布局优化——以江苏省句容市为例 张荣天(343)

农户参与 P2P 平台借贷的意愿及影响因素——以江苏省淮安市为例 刘荣茂,孙嘉琪(347)

考虑渠道权力结构的双渠道农产品供应链定价与决策 冯 春,高文达,毛 敏(353)

传统农区农户土地流转特征及影响因素分析 王 辉,杨朝现,杨 璇,等(358)

JIANGSU AGRICULTURAL SCIENCES

Vol. 46 No. 5 March 5 2018

CONTENTS

Monograph and Review

Review and prospect on social responsibility performance of agricultural leading enterprises	<i>Xu Xuegao, et al</i> (1)
Status and prospect of crop molecular marker assisted selection breeding	<i>Wang Yaqi, et al</i> (6)
Analysis of general situation of peanut mechanized harvest development at home and abroad	<i>Zhang Chong, et al</i> (13)
Research progress of polyploidy induction of <i>Salvia miltiorrhiza</i> Bunge. by colchicine	<i>Bai Yinghao, et al</i> (18)
Research progress of multiple effects of straw returning on farmland environment	<i>Chen Hao, et al</i> (21)
Research status and prospects of hairless pig germplasm resources	<i>Hu Huiyan, et al</i> (25)

Bio-technology

Cloning and bioinformatics analysis of WUSCHEL – related homeobox 4 – like gene <i>GhWOX4</i> in <i>Gossypium hirsutum</i> L.	<i>Yang Weijun, et al</i> (28)
Leaf callus induction and redifferentiation of some wild species in genus <i>Eriobotrya</i>	<i>Liu Yicun, et al</i> (32)
Study on preparation and regenerated factors of protoplasts from <i>Bacillus licheniformis</i> B – 1 and <i>Sphingomonas</i> sp. SC – 1	<i>Chen Qiexi, et al</i> (36)
Role of <i>MaCaM</i> and <i>MaCAMTA3</i> genes in heat treatment – induced chilling tolerance of banana fruit	<i>Wang Haibo, et al</i> (40)
Drought resistance of transformed sugar beet with <i>SST</i> gene driven by promoter MLL	<i>Liang Wenjie, et al</i> (43)
Analysis of vineyard soil bacterial diversity in Northern China by high throughput sequencing method	<i>Song Xuejie, et al</i> (48)

Genetics and Breeding • Tillage and Cultivation

Influence and simulation of cold damage degree on rice growth during heading and flowering stage	<i>Gao Yibo, et al</i> (53)
Effect of frog and rice ecological farming model on soil microbial characteristics	<i>Guo Wenxiao, et al</i> (57)
Breeding and cultivation techniques of three line hybrid rice combination “Quanyou 1393”	<i>Zhu Guoyong, et al</i> (61)
Effects of waterlogging on yield structure and yield reduction of winter rape (<i>Brassica napus</i> L.) in spring	<i>Liu Kaiwen, et al</i> (63)
Study on breeding of national registered indica hybrid rice cultivar “Yanliangyou 2208”	<i>Wang Aimin, et al</i> (66)
Effects of humic acid coupling on growth and photosynthesis characteristics of sunflower in saline land in Hetao irrigation district	<i>Hao Shuiyuan, et al</i> (69)
Correlation and path analysis of three top leaves and grain weight per spike of hybrid rice direct – seeded after rapeseed harvest	<i>Zhang Rongping, et al</i> (72)
Study on genetic effect of new tobacco cultivar with high potassium content	<i>Dai Linjian, et al</i> (76)
Effect of different fertilization time on seedling quality of mechanical transplanting rice	<i>Shao Wenqi, et al</i> (81)
Effects of different ratios of biochar in culture media on tobacco seedling quality	<i>Liu Guangliang, et al</i> (84)

Plant Protection

Relationships between host plant selection of <i>Paratrioza sinica</i> and host plant physical characteristics and secondary plant compounds	<i>Liu Xiaoli, et al</i> (88)
Screening of high virulent strains of <i>Beauveria bassiana</i> against <i>Leguminivora glycinivorella</i>	<i>Tao Shuxia, et al</i> (91)
Effects of <i>Trichoderma harzianum</i> strain WY – 1 on growth and disease control of tomato	<i>Qu Wei, et al</i> (94)
Isolation and identification of garlic endophytes and screening of their antagonistic strains	<i>Li Lexi, et al</i> (97)

Horticulture and Forestry

Dynamics of fruit size development of pear cultivars	<i>Tian Luming, et al</i> (102)
--	---------------------------------

Comprehensive evaluation of salt tolerance of <i>Prunus domestica</i> × <i>armeniaca</i> stock based on principal component analysis	Lu Mingyan, et al(105)
Study on photosynthetic characteristics of diploid and tetraploid <i>Fragaria nil gerrensis</i>	Xu Suting, et al(110)
Photosynthetic characteristics of <i>Paeonia ostii</i>	Zhang Zhihao, et al(113)
Study on pollen cryopreservation of cherry “Hongfenghu”	Song Changmei, et al(117)
Physiological changes during flower bud development of <i>Styrax tonkinensis</i>	Xu Liping, et al(120)
Effects of cucumber – straw mushroom rotation on bacterial diversity and enzyme activities in cucumber rhizosphere soils	Yang Wei, et al(124)
Effects of biochar on growth and cadmium concentration of Chinese cabbage under soil cadmium contamination	Chen Sen, et al(129)
Comparative study on photosynthetic characteristics between wild <i>Fragaria mandschurica</i> and cultivated strawberry	Ma Jiurong, et al(132)
Analysis of fertilization status and energy saving and emission reduction potential of grape in Hebei Province	Ma Zhenchao, et al(135)
Cryopreservation and regeneration of <i>Euonymus bungeanus</i> stem tips	Li Xiang, et al(140)

Husbandry and Veterinary · Aquaculture and Sericulture

Study on total miRNA in porcine milk exosome inhibiting porcine reproductive and respiratory syndrome virus replication	Cai Jinshun, et al(144)
Effect of zearalenone exposure on release of apoptotic proteins CytC and protective effect on NAC in Sertoli cells of rat	Xue Huamei, et al(147)
Effects of different feeding patterns on growth and slaughter performance of cherry volley duck	Wang Ligang, et al(151)
Effects of pH value on physiology of <i>Nostoc sphaeroides</i> Kützinger	Liu Shuwen, et al(153)
Study on dynamic regularity of contagious pleural pneumonia maternal antibody of piglets	Zhang Yan, et al(156)

Storage and Processing · Detection

Walnut kernel grading method based on machine vision	Cai Jian, et al(158)
Antifungal effects of seven edible algae extracts on food pathogenic bacteria	Luo Aiguo, et al(162)
Effect of oxygen absorbent treatment on quality of walnut kernel	Ma Xuemei, et al(167)

Agricultural Engineering and Information Technology

Balanced clustering for agricultural sensor networks based on adaptive firefly algorithm	Yuan Xuhua, et al(172)
Design and experiment of processing and feeding system of calf feeding regular milk	Qi Jiangtao, et al(177)
Design of main mechanism of a single electric tea – picking machine	Liu Biao, et al(180)
Forecast and early warning for wheat aphid based on deep learning	Wang Xiumei, et al(183)
Design of low pressure pipeline based on improved artificial fish swarm algorithm	Zhu Chengli, et al(187)
Construction of agricultural data collection platforms based crowdsourcing	Gu Geqi, et al(191)
Construction of agriculture science database based on Ontology	Su Yuning, et al(194)
Path planning of multi – function agricultural robot based on multiple optimization algorithms	Wang Hui, et al(199)
Multi – sensor data fusion of greenhouse environment based on spatio – temporal correlation	Zhou Jinsheng, et al(203)
Design and implementation of potato storage environment monitoring system based on Java	Liu Ruirui, et al(208)
Food production forecast based on gray limit learning machine	Fan Chao, et al(212)
Research and design of intelligent monitoring architecture for multimedia sensor network in crop area	Ren Hua(215)
Route planning algorithm of irregular area with obstacles based on fully automatic plant protection UAV	Jin Zexuan, et al(220)

Resources and Environment

Investigation and analysis of pollution sources of Gehu Lake	Cai Jinbang, et al(224)
Physicochemical properties, microbe population and soil enzymatic activities of root sheath soil of two Gramineae plants in southern margin of Junggar Basin	Ren Meilin, et al(227)
Preparation of diatomite modified wooden ceramics and its adsorption performance to tetracycline	Zhu Lingfeng, et al(232)

Analysis of population structure characteristics and spatial distribution pattern of *Fraxinus platypoda* Oliv. in Xiaolongshan National Nature Reserve Zhao Xinxin, et al(235)

Health quality assessment of hilly upland soil around Pingdingshan coal mining area Chu Chunjie, et al(240)

Temporal and spatial evolution of China’ provincial land use efficiency based on DEA model and Malmquist production efficiency index Pan Runqiu, et al(244)

Evaluation of water environment quality in different periods of Ling River basin Wang Qi, et al(250)

Study on paths of rural ecological environment governance under background of new media Mao Yangnan (255)

Accounting and analysis of carbon emissions in Gansu Province based on deconstruction model from 2000 to 2014 Zhang Zhihui, et al(257)

Preparation of diatomite modified wooden ceramics and its ultrasonic adsorption behavior to acid orange II Zhu Lingfeng, et al(261)

Health evaluation of land use system based on low carbon perspective—Taking Urumqi City in Xinjiang area as an example Ma Wenjuan, et al(264)

Evolution of arable land multi – function and diagnosis of its obstacle indicators in Hubei Province Zhao Zhishang, et al(268)

Groundwater quality environmental evaluation and pollution index analysis in southern Jiangsu—Taking Taicang City of Jiangsu Province as an example Mei Linlin, et al(272)

Regularity of heat injury of single – season rice during heading to flowering stage in Anhui Province Guo Jianmao, et al(275)

Estimation of N2O emission from farmlands in Beijing City—Based on regional nitrogen cycling IAP – N model Mao Guohua, et al(280)

Production of cellulase by solid state fermentation of *Penicillium* strain ZH1 using agricultural waste Zi Hui, et al(285)

Study on preparation of water – retaining agent by mixing acrylic acid and bentonite and its water retaining effect Li Bei, et al(289)

Agricultural Economy and Management

Alienation of equity relationship between members and rural mutual fund organizations and its formation mechanism Chen Dongping, et al(293)

Study on regional difference and economic development of China’s urban agricultural tourism—Based on panel model analysis Lei Lili, et al(297)

Evaluation of innovation capability of agricultural science and technology park based on factor analysis—Taking Anhui national parks as an example Xia Yanlei(303)

Innovation of O2O marketing model for tea industry Liu Luxing, et al(308)

Construction of regional brand based on characteristic agricultural industry—Taking “Lishui Shangeng” as an example Pan Chao(312)

Study on mobile e – commerce strategy of agricultural eco – tourism in Hainan Province Cai Shu(316)

Practice and reflection about reform of farmers’ housing property rights system from perspective of balancing urban and rural development—Taking Wenzhou City of Zhejiang Province as an example Shi Duanyin, et al(320)

Analysis of rural electronic commerce development path under background of “Internet + ”— Taking Shaanxi Province as an example Zhang Hong, et al(324)

Connotation and path arrangement of rural tourism accurate poverty alleviation Zhou Xiao(329)

Study on synergy development of agriculture and logistics based on industrial symbiosis Rong Luqing, et al(332)

Provincial spatial – temporal variation of coupled and coordinated development of China’s ecology – economy system Liu Deqiang, et al(338)

Spatial pattern characteristics and layout optimization of rural residential areas in hilly areas—Taking Jurong City of Jiangsu Province as an example Zhang Rongtian(343)

Farmers’ willingness to participate in lending on P2P platform and its influencing factors—Taking Huaian City of Jiangsu Province as an example Liu Rongmao, et al(347)

Pricing and decision – making of dual – channel agriculture product supply chain considering channel power structure Feng Chun, et al(353)

Analysis of farm households’ land circulation characteristics and its influencing factors in traditional agricultural areas Wang Hui, et al(358)