

江苏农业科学

第 46 卷 第 8 期 2018 年 4 月 20 日

目 次

● 专论与综述

- 逆境胁迫下植物磷脂酶 D 的生理功能和作用机制综述 李 丽, 孙 健, 何雪梅, 等(1)
- 联合生物加工木质纤维素生产生物乙醇的研究进展 孙曼钰, 彭太兵, 何士成, 等(5)
- 三维传感器 Kinect 在农业领域的应用与发展 陈 晨, 刘 涛, 武 威, 等(11)
- 四环素类抗生素快速分析方法研究进展 江 羚, 曾 昆, 邵 杰, 等(15)

● 生物技术

- 杨树和柳树基因组共线性的可视化分析 徐逸卿, 杜思源, 蒋安纳, 等(22)
- 3 种甲基化抑制剂对苜蓿生长及愈伤诱导的影响 贾永红, 刘 聪, 高 婧, 等(27)
- 狐狸 *PMEL* 基因密码子使用特性分析 郑晓宁, 李丽莎, 李祥龙(31)
- 花粉管通道法介导辣椒总 DNA 获得转基因小麦 郭向萌, 周晓君(36)
- 不同处理方法对茺蒿游离小孢子出胚率的影响 贾 凯, 吴 慧, 许 建, 等(39)
- 茶树 *CsGPX* 基因克隆及干旱胁迫下的表达分析 乔新荣, 张继英(42)
- 无油樟与葡萄、拟南芥、水稻基因组的多倍化及共线性分析 张 岚, 袁 敏, 王振怡, 等(45)

● 遗传育种与耕作栽培

- 吉林省春玉米不同生育期干旱时空特征分析 李 琪, 李莹莹, 任景全, 等(50)
- 生物质炭对玉米生长发育、产量及白浆土理化性状的影响 李传宝, 孟雨田, 李晓庆, 等(56)
- 玉米自交系丹 717 及改良系的配合力分析 丰 光, 刘 波(61)
- 不同木薯品种生理特性及产量比较研究 黄堂伟, 罗兴录, 单忠英, 等(64)
- 根区施肥对烤烟干物质积累及氮吸收的影响 王筱滢, 张云贵, 刘青丽, 等(70)
- 热量资源配置对甘肃烤烟生育期及品质的影响 宋文静, 靳志伟, 许建业, 等(74)
- 生物降解膜覆盖对烤烟光合特性、叶绿素荧光和农艺性状的影响 纪春艳, 张 爽, 李 慧, 等(77)
- 光强对湘南烟草生育后期光合及生理特性的影响 朱大恒, 张闪闪, 莫骏坚, 等(81)
- 不同钾肥施用方式和施用量对烟叶品质和经济性状的影响 王全贞, 潘义宏, 杨 森, 等(84)

● 植物保护

- 2007—2015 年小麦品种(系)抗白粉病性鉴定及评价 曹世勤, 黄 瑾, 孙振宇, 等(89)
- 氟磺胺草醚抑制大豆根瘤固氮酶活性与碳代谢关系的研究 纪广影, 丁 伟, 高文逸, 等(92)
- 南方水稻黑条矮缩病田间表现差异与防控措施 吴远国, 李红霞, 徐源辉(96)
- 毒死蜱抗性灰飞虱种群在不同温度下的相对适合度 朱 凤, 王利华, 张谷丰, 等(99)
- 乌腺金丝桃内生真菌分离鉴定及其醇溶物的抑菌活性 范东海, 赵丽丽, 常桂英(103)

苦参生物碱对黄瓜幼苗灰霉病防治效果研究	叶 嘉, 张倩茹, 张 浩(105)
白睡莲黑斑病菌的生物学特性及室内防治药剂筛选	朱洁倩, 魏 蜜, 张 伟, 等(109)
●园艺与林学	
川滇蔷薇的种下分类系统和表型变异	吴 旻, 李慧敏, 杨 维, 等(112)
水杨酸浓度对膜荚黄芪生物量、总黄酮和多糖积累的影响	王景然, 王 萌, 汪 洋, 等(120)
6 种常见彩叶灌木对干旱胁迫的生理响应	张文婷, 王子邦(123)
温室不同温度对枸杞果实及种子发育的影响	包 晗, 郑国琦, 苏雪玲, 等(127)
濒危水生植物莼菜茎叶的解剖与组织化学特征	胡露洁, 杨再辉, 周存宇, 等(131)
百合苗期耐碱性鉴定方法研究	孙明茂, 刘丽霞(136)
4 种园林绿化植物根际对土壤养分的富集效应	史 伟, 杨 群, 蒋跃军, 等(140)
氮磷钾配施对艾纳香生长及产量、品质的影响	顾 岑, 王华磊, 赵 致, 等(146)
干旱对沟叶结缕草光合作用的影响	韩莹莹, 马一粦, 吕 歆, 等(151)
外源水杨酸对广东润楠抗寒性的影响	何舒怀, 马永征, 费永俊(155)
白术水浸液对种子萌发及幼苗生长的自毒效应	王红佳, 薛兴华, 宋拉拉, 等(158)
●畜牧兽医与水产蚕桑	
枯草芽孢杆菌对多浪羊消化率、瘤胃发酵参数及血液指标的影响	苏勇华, 方 雷, 应 璐, 等(162)
中华补血草内生真菌发酵物的抑菌和抗氧化活性	毛 涵, 陈 婧, 代 飞, 等(166)
芽孢杆菌发酵棉粕粉脱酚及其饲喂肉鸡的效果	李 佳, 高同国, 袁洪水, 等(171)
黑斑蛙“白内障(歪头)”病原诊断	夏理海, 罗 凯, 李由申, 等(174)
一株肠源唾液乳杆菌的分离鉴定及生物学特性	许守涛, 刘旻恣, 储卫华(177)
●贮藏加工与检测分析	
黄、紫洋葱外层干皮和内层果肉总酚、总黄酮含量及抗氧化活性研究	王存堂, 李建立, 张译心, 等(180)
茅苍术叶片蛋白提取方法的比较	张文明, 巢建国, 谷 巍, 等(183)
提取剂对蛹虫草中虫草素提取产率的影响	潘传江, 丁 杰, 盛玉萍, 等(185)
提高鲫鱼汤原料蛋白溶出率的工艺优化	诸永志, 卞 欢, 吴海虹, 等(189)
茶树菇 β -葡萄糖苷酶的纯化及应用研究	陈 杏, 杨成丽, 鲍炳鑫, 等(192)
鱼腥草挥发油与黄连生物碱复合保鲜涂膜液对芒果的保鲜效果	蒋小飞, 张小菊, 方荣美(195)
缬草挥发油的微波辅助提取工艺及其抗氧化活性	李小红, 吴地尧, 李 安, 等(198)
AHLL 纳米粒制备工艺的研究	李 莹, 方旭波, 周剑忠, 等(202)
●农业工程与信息技术	
基于量子粒子群的柑橘果实图像约束聚类分割算法	龙金辉, 丁 汀(205)
基于 matlab 的番茄果实串检测提取	金超杞, 梁喜凤, 章 艳, 等(209)
甘薯机械移栽浇水作业模式简析	王公仆, 胡良龙, 胡志超, 等(212)
塔里木河流域上游胡杨叶面积指数高光谱遥感反演方法对比	张楠楠, 张 晓, 姚 娜, 等(216)
基于 Ecotect 的光伏温室内光环境分析	王 彪, 陈教科, 应建阳(221)
基于离散元法的小麦精量排种器性能模拟试验	于佳杨, 卢彩云, 卫如雪, 等(225)

基于肉类食品追溯系统的证据融合算法研究与改进 吴敏宁, 张永恒, 杨 斐(229)

用 MTF - QNN 模型预测水中溶解氧含量 贾花萍(232)

高速玉米精密排种器的研究 李 鑫, 籍俊杰, 冯晓静(237)

●资源与环境

不同枯落物添加量和处理方式对草地土壤微生物量碳的影响 社会石, 王良玉, 陈智文(241)

洞庭湖生态经济区农田景观格局变化及其驱动力 王 丹, 葛大兵, 唐伊凡, 等(245)

新疆南疆绿洲 - 荒漠过渡带土壤盐分和养分的空间异质性 查向浩, 莫治新, 林 宁, 等(250)

土地整理对土壤环境影响评价 谢昊廷, 冉瑞平, 冯秀智(255)

黑龙江省资源型城市城镇化质量与生态环境承载力耦合分析 李晓庆, 姜 博, 米 媛, 等(259)

基于 NDVI 的山区土地生态环境质量时空变化研究 崔娟敏, 季文光, 李洋宰(264)

1990—2015 年东北三省土地利用/覆被时空变化特征及其驱动力分析 吴 迪, 张冬有(268)

鄱阳湖湿地重金属空间分布特征及分析评价 任 琼, 张金池, 周莉荫, 等(275)

基于 GIS - ESDA 的四川省耕地产能分异特征及耕地单产主导因子分析
..... 晏蔚楠, 夏建国, 陈星燎, 等(279)

华北设施农业区气候资源分布及季节变化特征 乐章燕, 魏瑞江, 石茗化, 等(285)

抗菌海洋解淀粉芽孢杆菌 GM - 1 - 2 菌株摇瓶发酵培养基和发酵条件优化
..... 汪晶晶, 曹雪梅, 李 欢, 等(291)

3 个荷花品种对富营养水体和底泥中氮、磷去除能力比较研究 江 君, 李 欣, 徐 飞, 等(296)

太原市冬小麦播期农业热量资源突变分析 张立生, 温辉芹, 裴自友, 等(299)

餐厨垃圾中胶原蛋白和几丁质原位降解菌株的筛选与鉴定 李 芸, 王李忻, 葛梦娇, 等(304)

中国区域空中水资源的计算与订正 谭璐璐, 史 岚, 王茜雯, 等(307)

生物质炭对重金属污染土壤中汞的赋存形态及运移分配的影响 陈红卫, 张重路, 王一山, 等(312)

生物质炭施入对旱作农田土壤温室气体排放动态变化的影响 刘先良, 邓 茂, 王祥炳, 等(315)

●农业经济与管理

土地流转中契约期限的选择: 长期还是短期? ——基于湖北省孝昌县的实证分析
..... 何 军, 祝丽琴(320)

3D 立体和 2D 平面视角的城镇化、工业化、农业现代化协调发展研究——以内蒙古自治区为例
..... 郝 戊, 王瑞琼(325)

我国农业推进 PPP 模式的实践与路径分析 张 滢(331)

基于地区差异的消费者购买绿色农产品影响因素分析——以湖北武汉市和黄冈市为例
..... 周业旺, 董梦琦(335)

电子商务环境下基于收益共享与成本共担组合契约的农资供应链协调 霍 红, 崔天天(339)

苏南农村电子商务发展的空间特征及影响因素——以南京市淳溪镇为例
..... 陈 轶, 蒋常怡, 方智超, 等(345)

苏州市新型农业经营主体发展状况评价 程培垚(351)

江苏省种子企业提升科技创新能力的实践及思考 何 榕, 盖玉芳, 别同德, 等(355)

农民田间学校对农业技术扩散的影响研究——基于社会学习的视角 程 健, 贾相平(359)

JIANGSU AGRICULTURAL SCIENCES

Vol. 46 No. 8 April 20 2018

CONTENTS

Monograph and Review

- Physiological function and mechanism of phospholipase D in plants under stress: a review *Li Li, et al*(1)
- Research progress on bioethanol production by consolidated bioprocessing(CBP) of lignocellulose *Sun Manyu, et al*(5)
- Application and development of three dimensional sensor Kinect in agricultural field *Chen Chen, et al*(11)
- Research progress of rapid analysis methods for tetracyclines *Jiang Ling, et al*(15)

Bio-technology

- Visualized analysis of collinearity between poplar and willow genomes *Xu Yiqing, et al*(22)
- Effects of three kinds of methylation inhibitors on alfalfa growth and callus induction *Jia Yonghong, et al*(27)
- Analysis of codon operating characteristics of *PMEL* gene in *Vulpes* *Zheng Xiaoning, et al*(31)
- Molecular breeding of wheat by introducing total DNA of chili pepper in pollen – tube pathway *Guo Xiangmeng, et al*(36)
- Effects of different treatment methods on embryo rates of free microspores of turnip *Jia Kai, et al*(39)
- Cloning of *CsGPX* gene in *Camellia sinensis* and its expression analysis under drought stress *Qiao Xinrong, et al*(42)
- Analysis of polyploidization and collinearity among genomes of *Amborella*, grape, *Arabidopsis* and rice *Zhang Lan, et al*(45)

Genetics and Breeding • Tillage and Cultivation

- Analysis of drought spatial – temporal characteristics of spring maize during different growth periods in Jilin Province
..... *Li Qi, et al*(50)
- Effects of biochar on growth and yield of maize and soil physical and chemical properties *Li Chuanbao, et al*(56)
- Analysis of combining ability of maize inbred lines Dan717 and its improved lines *Feng Guang, et al*(61)
- Comparative study on physiological characteristics and yield of different cassava varieties *Huang Tangwei, et al*(64)
- Effects of root fertilization on dry matter accumulation and nitrogen absorption of flue – cured tobacco *Wang Xiaoying, et al*(70)
- Impacts of heat resource allocation on growth period and quality of flue – cured tobacco in Gansu Province
..... *Song Wenjing, et al*(74)
- Effects of biodegradable film on photosynthetic characteristics, chlorophyll fluorescence and agronomic traits of flue – cured tobacco
..... *Ji Chunyan, et al*(77)
- Influence of light intensity on physiological characteristics of flue – cured tobacco at mature stage in Southern Hunan
..... *Zhu Daheng, et al*(81)
- Effects of different potassium fertilizer treatments on quality and economic attributes of flue – cured tobacco leaves
..... *Wang Quanzhen, et al*(84)

Plant Protection

- Evaluation of resistance to powdery mildew of wheat varieties(lines) during 2007—2015 *Cao Shiqin, et al*(89)
- Inhibition of nitrogenase activity in soybean by fomesafen and its relationship with carbon metabolism *Ji Guangying, et al*(92)
- Field performance differences of rice black – streaked dwarf disease in southern areas and its controlling measures
..... *Wu Yuanguo, et al*(96)
- Comparative study on relative fitness of chlorpyrifos – resistant SBPH populations under different temperatures
..... *Zhu Feng, et al*(99)
- Isolation and identification of endophytic fungi isolated from *Hypericum* and its antimicrobial activity *Fan Donghai, et al*(103)
- Controlling effect of matrine on *Botrytis cinerea* in *Cucumis sativus* seedling *Ye Jia, et al*(105)

Biological characteristics of *Alternaria alternata* in white waterlily and screening of its indoor control agents Zhu Jieqian, et al(109)

Horticulture and Forestry

Intraspecific classification and phenotypic variation of *Rosa soulieana* Crép. Wu Min, et al(112)

Effects of salicylic acid concentration on accumulation of biomass, total flavonoids and polysaccharide in *Astragalus membranaceus* Wang Jingran, et al(120)

Physiological response to drought stress of four common color – leafed shrub species Zhang Wenting, et al(123)

Effects of different temperature on fruit and seed development of *Lycium barbarum* in greenhouse Bao Han, et al(127)

Anatomical and histochemical characteristics of stems and leaves of endangered aquatic plant *Brasenia schreberi* Hu Lujie, et al(131)

Study on identification method of alkali tolerance at seedling stage of lily Sun Mingmao, et al(136)

Enrichment effect of four landscape plants on rhizosphere soil nutrients Shi Wei, et al(140)

Effects of nitrogen, phosphorus and potassium combined application on growth, yield and quality of Miao medicine *Blumea balsamifera* Gu Cen, et al(146)

Effects of drought stress on photosynthesis of *Zoysia matrella* Han Yingying, et al(151)

Impact of exogenous salicylic acid on cold resistance of *Machilus kwangtungensis* Yang He Shuhuai, et al(155)

Autotoxic effect of *Atractylodes macrocephala* aqueous extracts on seed germination and seedling growth Wang Hongjia, et al(158)

Husbandry and Veterinary • Aquaculture and Sericulture

Effects of *Bacillus subtilis* on nutrient digestibility, rumen fermentation and blood indices of Duolang sheep Su Yonghua, et al(162)

Antibacterial and antioxidant activities of endophytic fungi fermentation products of *Limonium sinense* Mao Han, et al(166)

Dephenolization of cottonseed meal fermented with bacillus and its detoxification effect on broiler breeding Li Jia, et al(171)

“Cataract (Wry Head)” pathogen diagnosis in *Pelophylax nigromaculatus* Xia Lihai, et al(174)

Isolation, identification and biological characteristics of *Lactobacillus salivarius* isolated from feces Xu Shoutao, et al(177)

Storage and Processing • Detection

Study on total phenolics, total flavonoids contents and antioxidant activity of onion peel and pulp Wang Cuntang, et al(180)

Comparative study on extraction methods of leaf protein of *Atractylodes lancea* Zhang Wenming, et al(183)

Effect of organic solvents on extraction of cordycepin from *Cordyceps militaris* Pan Chuanjiang, et al(185)

Improvement of protein dissolution rate by optimization of crucian carp soup processing technology Zhu Yongzhi, et al(189)

Purification and application of β – glucosidase from *Agrocybe aegerita* Chen Xing, et al(192)

Effect of volatile oil from *Houttynia cordata* and flavine alkaloids compound fresh coating liquid on fresh – keeping of mango Jiang Xiaofei, et al(195)

Study on microwave – assisted extraction and antioxidant activity of essential oil from *Valeriana officinalis* ... Li Xiaohong, et al(198)

Study on preparation technology of AHLL – loaded nanoparticles Li Ying, et al(202)

Agricultural Engineering and Information Technology

Citrus fruit constrained clustering image segmentation algorithm based on quantum particle swarm Long Jinhui, et al(205)

Detection and extraction of tomato fruit string based on Matlab Jin Chaoqi, et al(209)

Analysis of watering operation mode for mechanical transplanting of sweet potato Wang Gongpu, et al(212)

Comparison of two inversion methods for *Populus diversifolia* leaf area index based on hyperspectral remote sensing in upper reaches of Tarim River Basin Zhang Nannan, et al(216)

Analysis of luminous environment of photovoltaic greenhouse using Ecotect models Wang Biao, et al(221)

Simulation test of performance of wheat precision seed – metering device based on discrete element method Yu Jiayang, et al(225)

Research and improvement on evidence fusion algorithm base on meat food traceability system Wu Minning,et al(229)

Prediction of dissolved oxygen content in water by MTF – QNN model Jia Huaping (232)

Study on precision seed – meter with high speed for corn Li Xin,et al(237)

Resources and Environment

Effects of different litter addition and treatments on microbial biomass carbon in grassland soil Du Huishi,et al(241)

Farmland landscape pattern change and its driving forces in ecological economic zone of Dongting Lake Wang Dan,et al(245)

Spatial heterogeneity of soil salinity and soil nutrient at an oasis – desert ecotone in Southern Xinjiang
..... Zha Xianghao,et al(250)

Evaluation of impact of land consolidation on soil environment Xie Haoting,et al(255)

Coupling analysis between quality of urbanization and carrying capacity of eco – environment in Heilongjiang Province
..... Li Xiaoqing,et al(259)

Study on spatial and temporal changes of land ecological environment quality based on NDVI Cui Juanmin,et al(264)

Study on land use/cover spatio – temporal changes and its driving force of three provinces in Northeastern China from 1990 to 2015
..... Wu Di,et al(268)

Spatial distribution characteristics and assessment of heavy metals in Poyang Lake Wetland Ren Qiong,et al(275)

Analysis of characteristics of farmland production differentiation and dominant factor affecting single yield in Sichuan Province
based on GIS – ESDA Yan Weinan,et al(279)

Climatic resource distribution and seasonal change characteristics for protected agriculture in Northern China
..... Le Zhangyan,et al(285)

Optimization of medium components and cultural conditions of marine *Bacillus amyloliquefaciens* GM – 1 – 2 strain with antifungal
activity Wang Jingjing,et al(291)

Comparison of removal nitrogen and phosphorus capacity from eutrophic water and sediment among three cultivars of *Nelumbo nucifera*
..... Jiang Jun,et al(296)

Mutation analysis of agricultural heat resources in sowing period of winter wheat in Taiyuan City Zhang Lisheng,et al(299)

Screening and identification of strain to degrade collagen and chitin in kitchen waste *in situ* Li Yun,et al(304)

Calculation and correction of China’s regional air water resources Tan Lulu,et al(307)

Effects of biochar on speciation and distribution of mercury in soils contaminated by heavy metals Chen Hongwei,et al(312)

Effect of biochar on dynamic changes of greenhouse gas emission from dryland Liu Xianliang,et al(315)

Agricultural Economy and Management

Choice of contract term in land transfer:long – term or short – term? —Based on empirical analysis of Xiaochang,Hubei Province
..... He Jun,et al(320)

Study on coordinated development of urbanization,industrialization and agricultural modernization from 3D stereoscopic and 2D
plane view—Taking Inner Mongolia Autonomous as an example Hao Wu,et al(325)

Practice and path analysis of China’s agricultural PPP model Zhang Ying(331)

Analysis of factors influencing consumers purchasing green agricultural products based on regional differences
—Taking Wuhan City and Huanggang City in Hubei Province as an example Zhou Yewang,et al(335)

Coordination of agricultural supply chain based on revenue – sharing and cost – sharing combination contract under e – commerce
environment Huo Hong,et al(339)

Spatial characteristics and influencing factors of e – commerce development in Southern Jiangsu—Taking Chunxi Town of Nanjing
City as an example Chen Yi,et al(345)

Evaluation of development status of newly – typed agricultural business entities in Suzhou City Cheng Peigang,et al(351)

Practice and thinking on raising scientific and technological innovation ability of seed enterprise in Jiangsu Province
..... He Rong,et al(355)

Impact of farmer field school on agricultural technology diffusion—Based on social learning perspectives Cheng Jian,et al(359)