

江苏农业科学

第 46 卷 第 24 期 2018 年 12 月 20 日

目 次

● 专论与综述

土地适度规模经营研究进展	史铁丑,徐晓红,胡忠俊(1)
我国水产品质量安全可追溯治理问题考察及其对策	郑建明,廖尹航(5)
散草捡拾拖车研究现状与发展对策	闫二伟,陈永生,韩柏和,等(10)
生物表面活性剂生产及应用的研究进展	刘伟杰,尤琰婷,赵若菲,等(15)
马铃薯种植灌溉方式及施肥研究进展综述	魏千贺,王 晨,范春梅,等(20)
设施瓜果类蔬菜耐低温冷害研究进展	张 瑛,张 甜,王 艳,等(23)
秸秆生物炭还田应用及环境风险综述	刘笑生,陆海鹰,崔红标,等(28)
果实套袋对果实品质影响研究进展	魏志峰,李秋利,高登涛,等(36)
果蔬干燥含水率在线测量技术研究现状及展望	李国鹏,谢焕雄,吴惠昌,等(41)

● 生物技术

山东银莲花组织培养植株再生体系的建立	陈春利,顾德政,刘 毓,等(47)
柳叶栒子组培快繁体系的建立	马媛春,张粉粉,程宗明(50)
果糖补料与真菌诱导对南方红豆杉细胞悬浮培养的协同效应	徐志荣,魏赛金(54)
盆栽菊花的茎尖组织培养快繁技术	李晓亮,张军云,张 钟,等(57)
家兔 Neto2 蛋白质的生物信息学分析	赵小峰,吴桂梅,金 磊,等(63)
黄连木茎段组培快繁体系的建立	马媛春,刘 慧,薛晓辉,等(67)
珍稀多肉植物霓虹灯玉露组培技术	张 波,荣立革(71)

● 遗传育种与耕作栽培

不同小麦品种颖果背部维管束发育研究	刘大同,陈 明,别同德,等(73)
优质高产粳稻新品种南粳 3818 的选育与利用	朱 镇,张亚东,陈 涛,等(77)
苗期调亏灌溉对玉米生理生化特性及养分积累的影响	罗英舰,刘君鹏,蒙懿练,等(79)
灌浆期高温对玉米叶片抗氧化酶活性及渗透调节物质的影响	芮鹏环,韩坤龙,王长进,等(82)
油菜苗期耐盐性差异与耐盐指标选择	申玉香,李洪山,封功能,等(85)
长期施肥对潮土有机碳含量及小麦产量的影响	刘明钟,张爱君,魏 猛,等(88)
施用粉煤灰和有机肥对土壤温度和玉米生长发育及水分利用效率的影响	庞 喆,张卫华,孙增慧,等(91)

● 植物保护

咪鲜胺混剂的生物活性测定及对水稻纹枯病的防治效果	刘怀阿,张春梅,吕 敏,等(95)
长三角地区果蔬灰霉病病菌对 5 种杀菌剂的抗性检测	卢晓雪,聂国媛,孙海燕,等(97)
疫木隔离结合释放花绒寄甲防治松材线虫病	陈元生,简迎龙,罗致迪,等(101)
多旋翼植保无人机喷雾均匀性试验	刘道奇,余永昌,张开飞,等(104)

● 园艺与林学

基于空间句法理论的个园空间分析	陈 宇,宗思雨(109)
活体取样并鉴定荷花花芽分化时期的方法研究	胡 鑫,王彦杰,金奇江,等(113)
丝棉木种子休眠特性及其解除	卢 芳,周 虹(116)
混合盐碱胁迫对黑果枸杞种子萌发的影响	詹振楠,马 青,王文娟,等(119)
不同基质对樱桃番茄生长及果实品质的影响	李德翠,高文瑞,徐 刚,等(123)

氮磷钾配施对番红花品质和产量的影响	张衡锋, 韦庆翠, 魏 欣, 等(126)
NaCl 胁迫下木槿嫁接苗及其砧木海滨木槿的生理响应	包学文, 李和平, 施 钦, 等(130)
NaCl 胁迫对长苞香蒲和芦苇生长及光合特性的影响	伍会萍, 丁振杰, 倪细炉(134)
黑木耳菌株农艺性状主成分分析与综合评价	刘俊娇, 孟秀秀, 李 晓, 等(139)
西瓜新品种苏蜜 10 号的选育及栽培技术	徐锦华, 羊杏平, 刘 广, 等(142)
不同盐碱胁迫对桔梗种子萌发和幼苗生理特征的影响	刘志洋, 刘 岩(144)
CO ₂ 加富对番茄幼苗生长及光合特性的影响	高 宇, 崔世茂, 宋 阳, 等(147)
紫叶紫薇新品系叶色变化理化因素研究	王 莹, 李 敏, 谈 峰, 等(150)
栽培密度和施肥处理对水果萝卜主要农艺性状和产量的影响	陈 迈, 吴建国, 张平平, 等(154)
老山芹正常试管苗和玻璃化苗的生理生化特性比较	马 婧, 杨系玲, 孙 聪, 等(158)
生菜 SSR 遗传多样性及其与营养品质性状的关联分析	王书珍, 黄兴学, 王斌才, 等(161)
●畜牧兽医与水产蚕桑	
鲟鱼肠道微生物多样性的研究	李小义, 张效平, 赵 凤, 等(164)
孔雀鱼胚后发育的器官组织学发生研究	方珍珍, 范 强, 陶秉春, 等(168)
H9N2 亚型禽流感可疑病料的病毒分离及初步鉴定	杨 婧, 刘宇卓, 刘青涛, 等(172)
大蒜素对猪卵巢卵泡颗粒细胞凋亡的影响	丁 威, 汤 静, 周燕芬, 等(177)
2016—2017 年江苏地区弯曲菌流行现状监测	颜 卫, 赵莎莎, 卢劲晔, 等(180)
洋葱渣和大蒜秸在澳杜湖杂交羔羊短期育肥中的饲喂效果	程云辉, 钱 勇, 董臣飞, 等(183)
蛋白质修饰粪肠球菌的 Ames 试验	丁丽军, 奚照寿, 袁华根(185)
池塘环境中异育银鲫鲤疱疹 II 型病毒(CyHV-2)的检测与传播途径分析	高敏敏, 税典章, 吴 萍, 等(187)
复合酶制剂对黄颡鱼生长性能、表观消化率及氮排放的影响	窦 勇, 姚妙爱(190)
网箱养殖密度对宽体金线蛭生长性能的影响	周文宗, 张莺莺, 涂尾龙, 等(194)
黄颡鱼不同湖泊群体及其子代的生长性能评估	秦 钦, 陈校辉, 陈炳耀, 等(197)
●贮藏加工与检测分析	
亚临界萃取紫茉莉籽油工艺优化及成分分析	聂 犇, 贺义昌, 单承莺, 等(201)
刺玫果总皂苷的提取方法及抗氧化活性研究	刘金璐, 雷永平, 王晓林, 等(204)
荷兰豆烫漂时间对商品性状及生理生化指标的影响	姜永平, 袁春新, 宋益民, 等(208)
基于高光谱和极限学习机的冷却羊肉表面细菌总数检测	魏 菁, 郭中华, 徐 静(211)
冷冻对甘薯紫色花青素提取的影响	徐 飞, 钮福祥, 孙 建, 等(214)
红外光谱结合 PCA-LDA 判别道地和非道地山药	张 芳, 周 昊, 徐 蓉, 等(217)
壳聚糖涂膜对蚕豆鲜荚采后生理及贮藏品质的影响	陈 惠, 王学军, 宋居易, 等(220)
蒙古蒿挥发油的化学组分及其抑菌活性分析	智亚楠, 陈月华, 温亚娟, 等(224)
白术不同极性溶剂萃取物的抗氧化活性	曹清华, 杜 莹, 韦万丽, 等(228)
超高压预处理对乳化肠品质的影响	白 云, 罗玲英, 庄昕波, 等(231)
分离植物甘油酯的薄层层析色谱法的优化	陈亚东, 薛金嫒, 徐 婷, 等(235)
●农业工程与信息技术	
基于改进 K 均值聚类的葡萄果穗图像分割	刘智杭, 于 鸣, 任洪娥(239)
4HCDS-100 型花生收获机机架的模式分析与振动测试	张亚萍, 胡志超, 游兆廷, 等(244)
微灌用筒式反冲洗过滤器结构设计与研究	岳飞龙, 罗 昕, 马富裕, 等(248)
基于卷积神经网络的马铃薯叶片病害识别系统	赵建敏, 李 艳, 李 琦, 等(251)
精准施肥大数据系统的研究与应用	荆旭全, 蔡德楠, 丁文翰, 等(256)
勺轮式大豆播种机排种机构优化设计与试验	李晓红, 陈再胜(262)
皇帝柑分类系统的目标提取	邹小林(266)
基于离散元法宽面施肥铲的仿真设计与试验	王 森, 霍晓静, 赵 金, 等(269)
基于变步长最大功率跟踪法的现代光伏农业控制策略研究	史建平, 张 兵, 蔡纪鹤(274)

基于特征融合的奶牛个体识别	张满园,米娜,于洋,等(278)
---------------------	------------------

●资源与环境

无机碳对铜绿微囊藻空间分布的影响研究	马文林,卫博,王思莹,等(282)
基于通用光谱模式分解(UPDM)算法的光谱指数一致性研究	姜海玲,张立福,郑世欣,等(286)
基于GIS与CLUE-S模型的土地利用/覆被变化模拟——以成都市龙泉驿区为例	岳智慧,王玉贵,任平(291)
农村宅基地空间格局及利用特征分析——以武汉市蔡甸区侏儒山街为例	罗怡丹,刘越岩,胡守庚,等(295)
不同环境风险情景下农业土地利用效应评价——以长沙市金井镇为例	李洪庆,郑菲,赵姚阳(302)
阳离子絮凝剂对景观水的净化效果及其工艺条件	邵颖,汪敏,赵永富,等(308)
有机肥不同施肥量对茶园土壤微生物区系的影响	赵晓楠,李玉红,芦阿虔,等(311)
基于植被供水指数的河南2012年春季干旱监测	成威,王连喜,李琪,等(315)
基于CLUE-S模型和Markov模型的土地利用变化模拟预测——以德阳市为例	邓元杰,潘洪义,陈丹,等(321)
大城市近郊区土地利用及景观格局演变对生态服务价值的影响——以成都市龙泉驿区为例	陈丹,蒋贵国,邓元杰,等(328)

印度梨形孢发酵条件优化及玉米田间应用试验	张玲秀,白建华,郝瑞林,等(334)
铁皮石斛内生真菌诱导子制备及其可溶性糖含量测定	朱波,齐川,斯金平,等(338)
稳定剂对铅、铜污染土壤的稳定效果	孙辰鹏,赵远,韩志华,等(341)
基于云模型的土地生态质量评价及障碍因素诊断——以陕西省榆林市为例	麻小婷,南灵,何岩岩(345)
冠层集聚指数对水稻LAI测量精度的影响	刘振波,葛海啸,葛云健,等(352)
滨海不同湿地类型土壤微生物功能多样性	顾国海,李梦莎(355)
改性芦苇生物质炭对水中硝态氮的吸附特性	胡志新,时萌,孙菁,等(359)
生物沥浸对城市污泥中重金属去除研究	王京,冉全,范百龄,等(363)
金属离子及表面活性剂对土著菌产纤维素酶的影响	杨耀刚,田瑞华(366)
白洋淀水体氮磷时空分布与富营养化分析	阳小兰,张茹春,毛欣,等(370)
基于TM影像的新型组合水体指数模型研究	聂欣然,刘荣,聂爱球,等(374)
黑藻对沉积物上覆水及间隙水中磷垂直浓度变化的影响	黄立章,许超,陈涛,等(379)

●农业经济与管理

气候变化对我国棉花产量的影响——基于C-D-C模型的实证分析	王太祥,董舒婷(383)
山东省碳排放约束下农业全要素生产率及影响因素分析	刘芳,张红丽(387)
供给端优化下的田园综合体产业体系构建方法分析——以南京市溪田田园综合体为例	史莹,曾玉荣,曹仁勇,等(391)
新型职业农民的理想来源与培育路径	葛磊,邵元健,徐春春,等(395)
农村土地经营权抵押融资风险:类型、原因及域外经验	史明灿(399)
浙江省温州市农业电子商务发展模式分析及创新研究	曾敏,唐闻捷,王贤川,等(403)
河北省粮食生产结构变化及其水土资源效应	沈方,郝瑞彬,尹力军,等(408)
基于“互联网+”的苏州农业与二三产业融合对策	赵春燕,王佳(413)
电商环境下消费者对有机农产品的接受行为研究	唐庆娟,俞守华,林奕纯,等(417)
福建省水稻生产效率及其影响因素分析——基于家庭农场和传统小农户的微观视角	刘德娟,周琼,黄欣乐,等(422)
农业科研事业单位编外用工管理的新思路——以江苏省农业科学院为例	孙杨,王永霞,傅泽红(427)
田园综合体游客需求特征与满意度评价	王亚南,鲁莉,刘庆友(430)
休闲农业助力乡村振兴的对策建议	曹庆穗,金雯,刘建龙,等(434)
农业产业集聚与碳排放:我国省际层面的实证分析	李文华,周倩,陈永强(436)
稻鱼共作模式效益评价指标体系的构建——以湖南省辰溪县为例	彭诗瑶,刘琼峰,杨友才,等(442)
中国水产养殖产业集群可持续发展影响因素分析	钱芳,姜启军(445)
《江苏农业科学》投稿须知	(450)
《江苏农业科学》2018年第46卷总目次	(I)

JIANGSU AGRICULTURAL SCIENCES

Vol. 46 No. 24 December 20 2018

CONTENTS

Monograph and Review

Research progress on moderate scale operation of land	Shi Tiechou, <i>et al</i> (1)
Problem investigation and countermeasures of quality and safety traceability of China's aquatic products	Zheng Jianming, <i>et al</i> (5)
Research status and development suggestions of straw pick – up wagon	Yan Erwei, <i>et al</i> (10)
Research progress on production and application of biosurfactant	Liu Weijie, <i>et al</i> (15)
Research progress of planting, irrigation and fertilization of potato; a review	Wei Qianhe, <i>et al</i> (20)
Research progress of low temperature resistance of facilities melon and fruit vegetables	Zhang Ying, <i>et al</i> (23)
Field application of straw biochar and its environment risk; a review	Liu Xiaosheng, <i>et al</i> (28)
Effects of bagging on fruit quality: a review	Wei Zhifeng, <i>et al</i> (36)
Research status and prospect of on – line measurement technology of moisture content of fruits and vegetables in drying process	Li Guopeng, <i>et al</i> (41)

Bio-technology

Establishment of tissue culture regeneration system of <i>Anemone shikokiana</i>	Chen Chunli, <i>et al</i> (47)
Establishment of tissue culture and rapid propagation system of stem segment from <i>Cotoneaster salicifolius</i>	Ma Yuanchun, <i>et al</i> (50)
Synergistic effects of fructose feeding and fungal elicitor on suspension culture of <i>Taxus chinensis</i> var. <i>mairer</i>	Xu Zhirong, <i>et al</i> (54)
Tissue culture and rapid propagation techniques of stem – tip from potted chrysanthemum	Li Xiaoliang, <i>et al</i> (57)
Bioinformatics analysis of Neto2 protein in rabbits	Zhao Xiaofeng, <i>et al</i> (63)
Establishment of tissue culture and rapid propagation system of stem segment from <i>Pistacia chinensis</i> Bunge	Ma Yuanchun, <i>et al</i> (67)
Study on tissue culture technology of rare succulent plant <i>Haworthia cooperi</i> “Neon Lamp”	Zhang Bo, <i>et al</i> (71)

Genetics and Breeding • Tillage and Cultivation

Study on development of dorsal vascular bundles in caryopsis of different wheat cultivars	Liu Datong, <i>et al</i> (73)
Development and utilization of new japonica rice cultivar “Nangeng 3818” with good quality and high yield	Zhu Zhen, <i>et al</i> (77)
Effects of regulated deficit irrigation on physiological and biochemical characteristics and nutrient accumulation of maize during seedling period	Luo Yingjian, <i>et al</i> (79)
Influences of high temperature on antioxidant enzyme activities and osmotic adjustment substances in maize leaves during grain filling stage	Rui Penghuan, <i>et al</i> (82)
Salt tolerance difference of rape seedlings and selection of salt tolerance indices	Shen Yuxiang, <i>et al</i> (85)
Effects of long – term fertilization on soil organic carbon content and wheat yield in fluvo – aquic soil	Liu Mingzhong, <i>et al</i> (88)
Impacts of fly ash and organic fertilizers on soil temperature, growth and water use efficiency of maize	Pang Zhe, <i>et al</i> (91)

Plant Protection

Determination of biological activity of prochloraz mixture and its control efficacy on rice sheath blight	Liu Huai'a, <i>et al</i> (95)
Detection of resistance of <i>Botrytis cinerea</i> to five fungicides from fruit and vegetable crops in the Yangtze River Delta	Lu Xiaoxue, <i>et al</i> (97)
Control effect of plague wood isolation combined with release of <i>Dastarcus helophoroides</i> on pine wood nematode	Chen Yuansheng, <i>et al</i> (101)
Spray uniformity test of multi – rotor plant protection UAV	Liu Daoqi, <i>et al</i> (104)

Horticulture and Forestry

Space analysis of Geyuan garden in Yangzhou City based on space syntax theory	Chen Yu, <i>et al</i> (109)
Study on methods of sampling <i>in vivo</i> and flower bud differentiation period identification of <i>Nelumbo nucifera</i>	Hu Xin, <i>et al</i> (113)
Characteristics and breaking of dormancy of <i>Euonymus bungeanus</i> seeds	Lu Fang, <i>et al</i> (116)
Effects of salt – alkali stress on seed germination of halophyte <i>Lycium ruthenicum</i>	Zhan Zhennan, <i>et al</i> (119)
Influences of different substrates on growth and fruit quality of cherry tomato	Li Decui, <i>et al</i> (123)
Effects of combined application of N, P and K on quality and yield of <i>Crocus sativus</i>	Zhang Hengfeng, <i>et al</i> (126)
Physiological responses of grafted <i>Hibiscus syriacus</i> and its rootstock <i>H. hamabo</i> under NaCl stress	Bao Xuewen, <i>et al</i> (130)

Effects of NaCl stress on growth and photosynthetic properties of *Phragmites australis* and *Typha angustata* Wu Huiping, et al(134)

Principal component analysis and comprehensive evaluation of agronomic traits of black fungus strains Liu Junjiao, et al(139)

Breeding and cultivation techniques of new watermelon cultivar “Sumi No. 10” Xu Jinhua, et al(142)

Effects of different salt – alkaline stress treatments on seed germination and physiological characteristics of *Platycodon grandiflorum*
..... Liu Zhiyang, et al(144)

Impacts of CO2 enrichment on growth and photosynthetic characteristics of tomato seedlings Gao Yu, et al(147)

Study on physiological and biochemical factors of leaf color changes of a new crape myrtle (*Lagerstroemia indica*) cultivar
..... Wang Ying, et al(150)

Influences of planting density and fertilization treatments on main agronomic characters and yield of fruit radish Chen Mai, et al(154)

Comparison of physiological and biochemical characteristics of normal test tube seedlings and vitrified seedlings of *Heracleum moellendorffii*
..... Ma Jing, et al(158)

SSR genetic diversity of lettuce and its association with nutritional quality traits Wang Shuzhen, et al(161)

Husbandry and Veterinary · Aquaculture and Sericulture

Study on diversity of gut microbiota of sturgeon Li Xiaoyi, et al(164)

Histological study on postembryonic development of organs in *Poecilia reticulata* Fang Zhenzhen, et al(168)

Viral isolation and preliminary identification of H9N2 subtype of avian influenza virus from suspected samples Yang Jing, et al(172)

Effect of allicin on ovarian granulosa cell apoptosis in pigs Ding Wei, et al(177)

Surveillance on prevalence of *Campylobacter* spp. in Jiangsu Province in 2016—2017 Yan Wei, et al(180)

Effects of onion dregs and garlic straw on short – term fattening of mutton hybrid sheep Cheng Yunhui, et al(183)

Ames test of *Enterococcus faecalis* modified by protein Ding Lijun, et al(185)

Analysis of pathogenesis detection and transmission route of cyprinid herpesvirus II (CyHV – 2) in silver crucian carp (*Carassius auratus gibelio*) in pond environment Gai Minmin, et al(187)

Effects of compound enzyme preparation on growth performance, apparent digestibility and nitrogen emissions of *Pelteobagrus fulvidraco*
..... Dou Yong, et al(190)

Effects of density of cage culture on growth performance of *Whitmania pigra* Zhou Wenzong, et al(194)

Evaluation of growth performance of different geographic populations and their hybrid offsprings of *Pelteobagrus fulvidraco*
..... Qin Qin, et al(197)

Storage and Processing · Detection

Process optimization and composition analysis of subcritical extraction of oil from *Mirabilis jalapa* seeds Nie Wei, et al(201)

Study on extraction methods and antioxidant activity of total saponins from *Rosa davurica* Pall. fruit Liu Jinlu, et al(204)

Effects of boiled time of Dutch beans on commercial traits and physiological and biochemical indices Jang Yongping, et al(208)

Measurement of total viable count on chilled mutton surface based on hyperspectral technique and extreme learning machine
..... Wei Jing, et al(211)

Influence of refrigeration on extraction of purple pigment from sweet potato Xu Fei, et al(214)

Discrimination of trueborn Chinese yam by infrared spectra coupled with PCA – LDA analysis Zhang Fang, et al(217)

Effects of chitosan coating treatment on postharvest physiology and storage quality of faba bean fresh pod Chen Hui, et al(220)

Analysis of chemical constituents and antifungal activity of essential oil from *Artemisia mongolica* Zhi Yanan, et al(224)

Study on antioxidant activity of different polar solvent extracts from *Atractylodes macrocephala* Koidz Cao Qinghua, et al(228)

Influence of high pressure processing on quality of emulsified sausage Bai Yun, et al(231)

Optimization of thin – layer chromatography method for separation of glycerol lipids from plants Chen Yadong, et al(235)

Agricultural Engineering and Information Technology

Grape spike image segmentation based on improved K means clustering Liu Zhihang, et al(239)

Modal analysis and vibration test on frame of 4HCDS – 100 type peanut harvester Zhang Yaping, et al(244)

Structure design and research of cylindrical backwash filter for micro – irrigation Yue Feilong, et al(248)

Potato leaf disease identification system based on convolutional neural network Zhao Jianmin, et al(251)

Research and application of precision fertilization big data system Jing Xuquan, et al(256)

Optimization design and experimental study on seed arrangement mechanism of spoon – wheel soybean planter Li Xiaohong, et al(262)

Object extraction of emperor tangerine classification system Zou Xiaolin, et al(266)

Simulation and experiment of wide fertilizing shovel based on discrete element method Wang Sen, et al(269)

Study on modern photovoltaic agricultural control strategy based on variable step size maximum power tracking method
..... Shi Jianping, et al(274)

Recognition of individual dairy cattle based on feature fusion Zhang Mantun, et al(278)

Resources and Environment

Study on effect of inorganic carbon on spatial distribution of *Microcystis aeruginosa* Ma Wenlin, et al(282)

Study on spectral index consistency based on universal pattern decomposition method Jiang Hailing, et al(286)

Simulation of land use/cover change based on GIS and CLUE – S model—Taking Longquanyi District of Chengdu City as an example
..... Yue Zhihui, et al(291)

Analysis of spatial pattern and utilization characteristics of rural residential land—Taking Zhurushan Street, Caidian District, Wuhan City
as an example Luo Yidan, et al(295)

Evaluation of agricultural land use effects under different environmental risk scenarios—Taking Jinjing Town of Changsha City as an example
..... Li Hongqing, et al(302)

Purification effect of cationic flocculant on landscape water and its process conditions Shao Ying, et al(308)

Impacts of different amounts of organic fertilizer on soil microbial flora of tea plantation Zhao Xiaonan, et al(311)

Drought monitoring based on vegetation supply water index in Henan Province in spring of 2012 Cheng Wei, et al(315)

Simulation and prediction of land use change based on CLUE – S model and Markov model—Taking Deyang City as an example
..... Deng Yuanjie, et al(321)

Effects of land use structure and landscape pattern change on ecosystem service value in suburbs of big city—Taking Longquanyi
District of Chengdu City as an example Chen Dan, et al(328)

Optimization of fermentation conditions of *Piriformospora indica* and its application in corn field Zhang Lingxiu, et al(334)

Preparation of endophytic fungi elicitor from *Dendrobium candidum* and determination of its soluble sugar content
..... Zhu Bo, et al, et al(338)

Stabilization effect of stabilizers on soil contaminated by Pb and Cu Sun Chenpeng, et al(341)

Evaluation of land ecological quality and diagnosis of obstacle factors based on cloud model—Taking Yulin City of Shaanxi Province as an
example Ma Xiaoting, et al(345)

Effect of canopy aggregation index on measurement accuracy of rice LAI Liu Zhenbo, et al(352)

Soil microbial functional diversity of different types of wetlands in coastal areas Gu Guohai, et al(355)

Adsorption characteristics of modified reed biomass carbon for nitrate nitrogen in water Hu Zhixin, et al(359)

Study on removal of heavy metals in municipal sludge by bioleaching Wang Jing, et al(363)

Influence of metal ions and surfactants on production of cellulase by indigenous bacteria Yang Yaogang, et al(366)

Analysis of spatial and temporal distribution of nitrogen and phosphorus and eutrophication of water in Baiyangdian Lake
..... Yang Xiaolan, et al(370)

Study on a new combined water index model based on TM image Nie Xinran, et al(374)

Effects of *Hydrilla verticillata* on vertical phosphorus concentration variation of overlying water and interstitial water of sediment
..... Huang Lizhang, et al(379)

Agricultural Economy and Management

Impact of climate change on China’s cotton production – Empirical analysis based on provincial panel data Wang Taixiang, et al(383)

Analysis of agricultural total factor productivity and its influencing factors under carbon emission restriction in Shandong Province
..... Liu Fang, et al(387)

Analysis of construction method of rural comprehensive industrial system under optimization of supply side—Taking Xitian garden
complex in Nanjing City as an example Shi Ying, et al(391)

Ideal source and cultivation path of new professional farmers Ge Lei, et al(395)

Risk of mortgage financing for rural land management rights; types, reasons and extraterritorial experiences Shi Mingcan(399)

Study on development model and innovation of agriculture e – commerce in Wenzhou City of Zhejiang Province Zeng Min, et al(403)

Structural changes of grain production in Hebei Province and their effects on water and soil resources Shen Fang, et al(408)

Countermeasures of integration of agriculture and secondary and tertiary industry in Suzhou City based on “Internet + ”
..... Zhao Chunyan, et al(413)

Study on consumers’ acceptance behavior for organic agricultural products under e – commerce environment Tang Qingjuan, et al(417)

Analysis of rice production efficiency and its influencing factors—Based on micro perspective of family farms and traditional small farmers
..... Liu Dejuan, et al(422)

Exploring new ideas for management of non – permanent workers in agricultural scientific research institutions—Taking Jiangsu Academy of
Agricultural Sciences as an example Sun Yang, et al(427)

Tourists’ demand characteristics and satisfaction evaluation of rural complex Wang Yanan, et al(430)

Countermeasures and suggestions for leisure agriculture to promote rural revitalization Cao Qingsui, et al(434)

Agricultural industry agglomeration and carbon emissions; empirical analysis of China’s provincial level Li Wenhua, et al(436)

Construction of benefit evaluation index system for rice – fish co – production model—Taking Chenxi County of Hunan Province as an
example Peng Shiyao, et al(442)

Analysis of factors influencing sustainable development of China’s aquaculture industry clusters Qian Fang, et al(445)