江苏农业科学

第 54 卷　第 13 期　2026 年 7 月 5 日

目　　次

●专论与综述

植物响应砷胁迫的生理、分子和根际微生态机制研究进展 …… 穆　丹,贾凡乐,梁英辉(1)

植物种子传播病毒研究进展 …… 范国权,高艳玲,韩树鑫,等(8)

微生物菌剂在蔬菜连作障碍中的应用研究进展 …… 李成龙,李　鹏,李方飞,等(16)

稻-虾综合种养技术研究进展 …… 林明涛,冼健安,郑佩华,等(26)

大豆疫霉根腐病抗性基因研究进展与防控策略 …… 梁文卫,毕影东,李　炜,等(35)

减施化学氮肥对烤烟生长生理和产质量的影响研究进展 …… 刘春奎,焦敬华,李志豪,等(42)

●生物技术

金银花 MYB 转录因子的全基因组鉴定、表达与密码子偏好性分析 …… 孙会改,何　培,韩晓伟,等(55)

蓖麻蚕热激蛋白基因 *PcrHsp90* 克隆及其在高低温胁迫下的表达特性 …… 张永红,李　波,王正琴,等(64)

HmF35H 基因调控绣球花色转变的机制 …… 吴跃凡,王宣婷,张晓龙,等(72)

枳椇属植物的叶绿体基因组特征、密码子偏好性及系统发育分析 …… 莫双凤,张　蕊,刘　蝶,等(80)

●遗传育种与种质资源

黄淮南片小麦新品种(系)产量、农艺性状与抗性综合分析 …… 孟自力,宋　晓,朱　倩,等(90)

黄淮麦区国审小麦品种抗病性分析与评价 …… 张　凡,董军红,侯军红,等(101)

基于转录组测序挖掘藜麦三萜皂苷合成相关基因 …… 田佳启,王树彦,旭　日,等(110)

●耕作栽培与生理生化

氮改性生物炭与化肥配施对稻田土壤氮素、水稻产量及氮素利用的影响

…… 肖　辉,李梦琦,张　慧,等(119)

氮肥减施后移对水稻生长、产量及氮素利用率的影响 …… 杜　萌,马凌霄,吕小红,等(125)

施氮量对不同氮效率春玉米品种氮素转运及产量的影响 …… 杨绣娟,杨　洋,杨　锋,等(131)

水氮管理下棉花 NDVI 对叶片氮素的响应特征 …… 李圣杰,林　丽,曹　伟,等(137)

不同穗型谷子品种农艺性状、干物质积累及转运和光合性能对产量的影响
…… 孙　影,叶　录,邢雪茹,等(145)
基于 GGE 双标图的不同类型花生品种密度效应分析 …… 王　芳,吕娇艳,邢晓宁,等(152)
●园艺与林学
有机肥配施生物炭对陇东旱塬区苹果产量、果园土壤质量与固碳效果的影响
…… 韩　萍,姚志龙,曾　涛,等(160)
叶面喷施纳米硅对苹果果实品质和香气成分的影响 …… 侯应军,杨生瑞,李文芳,等(168)
根系干湿分区灌溉对葡萄光合特性和果实品质的影响 …… 王超萍,费　腾,严战伟,等(178)
六盘山区不同省力化种植模式对萝卜生长发育的影响 …… 陆　铭,王欣怡,李　浩,等(185)
●动物科学与动物医学
猪伪狂犬病病毒 US9 蛋白多克隆抗体制备及其应用 …… 崔泽旭,金前跃,郭振华,等(193)
●贮藏加工与检测分析
烤烟化学成分、感官质量与致香成分的关联分析 …… 侍浩良,王继明,郑元仙,等(199)
烤制晒烟纤维素降解菌的产酶优化及发酵烟叶风味成分分析 …… 郭　伟,霍天辰,金　哲,等(208)
●农业工程与信息技术
融合多生育期气象特征的小麦产量深度学习预测方法 …… 贠　超,韩　勇,陈红旗,等(215)
基于改进 YOLO v11 的轻量级草莓成熟度检测方法…… 牛　珂,陈　妍,简在海(226)
●农业资源与环境
钝化剂生物炭添加量对花生土壤-籽仁镉、铅积累及品质的影响 …… 张枫叶,陈　雷,李　可,等(234)
紫花苜蓿与不同作物轮作对土壤化学性质和酶活性的影响 …… 白长胜,徐艳霞,王若丁,等(242)
鄱阳湖流域化肥减量增效的时空演变、驱动机制及生态经济效应研究
…… 王清亚,邬书良,吴珍云,等(249)
不同农业管理措施对秸秆还田水稻产量和甲烷排放影响的 Meta 分析 …… 杨建勋,郑恩楠,孟凡香,等(260)
2014—2023 年山西省小麦生产体系碳氮足迹的年际演变特征及构成分析
…… 代新俊,郝　煜,闫子倩,等(268)
薄壳山核桃间作不同作物对土壤养分、酶活性及微生物多样性的影响 …… 侯孟昕,莫正海,左继林,等(276)
●农业经济与管理
中国农业全产业链数字化发展:统计测度、地区差异与收敛分析 …… 戴　昕,何　颖,刘一键(283)
农业文化遗产保护中“利益共享”的法律实现机制 …… 张笑航(293)

JIANGSU AGRICULTURAL SCIENCES
Vol. 54 No. 13 July 5 2026

CONTENTS

Monograph and Review

Research progress on physiological, molecular and rhizosphere microecological mechanisms of plants in response to arsenic stress ····· *Mu Dan, et al*(1)

Research progress on virus transmission by plant seeds ····· *Fan Guoquan, et al*(8)

Research progress on application of microbial inoculants in vegetable continuous cropping obstacles ····· *Li Chenglong, et al*(16)

Research progress on integrated rice-shrimp farming technology ····· *Lin Mingtao, et al*(26)

Research progress and control strategies for resistance genes against soybean phytophthora root rot ····· *Liang Wenwei, et al*(35)

Research progress on effects of reduced chemical nitrogen fertilizer application on growth, physiology, yield and quality of flue-cured tobacco ····· *Liu Chunkui, et al*(42)

Biotechnology

Genome identification, expression and codon bias analysis of MYB transcription factors in *Lonicera japonica* ····· *Sun Huigai, et al*(55)

Cloning of heat shock protein 90 gene in *Philosamia cynthia* ricini and its expression characteristics under high and low temperature stress ····· *Zhang Yonghong, et al*(64)

Mechanism of *HmF35H* gene regulating color change of *Hydrangea* flowers ····· *Wu Yuefan, et al*(72)

Chloroplast genome characteristics, codon preference, and phylogenetic analysis of *Hovenia* plants ····· *Mo Shuangfeng, et al*(80)

Genetics and Breeding · Germplasm Resources

Comprehensive analysis of yield, agronomic traits and resistance of new wheat varieties (lines) in southern Huang-Huai area ····· *Meng Zili, et al*(90)

Analysis and evaluation of disease resistance of national approved wheat cultivars in Huang-Huai wheat region ····· *Zhang Fan, et al*(101)

Identification of genes associated with triterpenoid saponin biosynthesis in quinoa based on transcriptome ····· *Tian Jiaqi, et al*(110)

Tillage and Cultivation · Physiology and Biochemistry

Influences of combined application of nitrogen-modified biochar and chemical fertilizer on soil nitrogen, rice yield, and nitrogen utilization in paddy fields ····· *Xiao Hui, et al*(119)

Effects of reduced and delayed application of nitrogen fertilizer on growth, yield and nitrogen use efficiency of rice ····· *Du Meng, et al*(125)

Impacts of nitrogen application rate on nitrogen transport and yield of spring corn cultivars with different nitrogen efficiency ····· *Yang Xiujuan, et al*(131)

Response characteristics of cotton NDVI to leaf nitrogen content under water and nitrogen management ····· *Li Shengjie, et al*(137)

Effects of agronomic traits, dry matter accumulation and transportation and photosynthetic performance on yield of millet cultivars with different panicle types ····· *Sun Ying, et al* (145)
Analysis of density effects of different peanut cultivars based on GGE biplot ····· *Wang Fang, et al* (152)

Horticulture and Forestry

Impacts of organic fertilizer combined with biochar on apple yield, orchard soil quality, and carbon sequestration in arid plateau region of eastern Gansu ····· *Han Ping, et al* (160)
Influences of foliar application of nano-silicon on quality and aroma compounds of apple ····· *Hou Yingjun, et al* (168)
Effects of partial rootzone irrigation on photosynthetic characteristics and fruit quality of grape ····· *Wang Chaoping, et al* (178)
Impacts of different labor-saving cultivation modes on growth of radish in Liupan mountain area ····· *Lu Ming, et al* (185)

Animal Science and Animal Medicine

Preparation and application of polyclonal antibody against pseudorabies virus US9 protein ····· *Cui Zexu, et al* (193)

Storage and Processing · Detection

Association analysis among chemical components, sensory quality and aroma components in flue-cured tobacco ····· *Shi Haoliang, et al* (199)
Optimization of enzyme production by cellulose-degrading bacteria from fire-cured and sun-cured tobacco and analysis of flavor components in fermented tobacco leaves ····· *Guo Wei, et al* (208)

Agricultural Engineering and Information Technology

A deep learning-based prediction method for wheat yield integrating meteorological characteristics across multiple growth stages ····· *Yun Chao, et al* (215)
A lightweight detection method for strawberry ripeness based on improved YOLO v11 ····· *Niu Ke, et al* (226)

Agricultural Resources and Environment

Influences of addition amount of passivator biochar on cadmium and lead accumulation and quality of peanut soil-seeds and kernels ····· *Zhang Fengye, et al* (234)
Effects of alfalfa and different crop rotation patterns on soil chemical properties and enzyme activities ····· *Bai Changsheng, et al* (242)
Study on spatiotemporal evolution, driving mechanisms, and ecological-economic effects of fertilizer reduction and efficiency improvement in Poyang Lake Basin ····· *Wang Qingya, et al* (249)
Study on effects of different agricultural management measures on rice yield and CH_4 emissions in straw-returned paddy fields based on Meta analysis ····· *Yang Jianxun, et al* (260)
Analysis of interannual evolution characteristics and composition of carbon and nitrogen footprints in wheat production system in Shanxi Province from 2014 to 2023 ····· *Dai Xinjun, et al* (268)
Effects of intercropping different crops with thin-shelled pecans on soil nutrient, enzyme activity and microbial diversity ····· *Hou Mengxin, et al* (276)

Agricultural Economy and Management

Digital development level of China's whole agricultural industry chain: statistical measurement, regional differences and convergence analysis ····· *Dai Xin, et al* (283)
Legal realization mechanism of "benefit sharing" in protection of agricultural cultural heritage ····· *Zhang Xiaohang* (293)