

植物保护学报

第49卷 第1期

目次

创刊60周年专辑

六十年防治病虫害保驾护航 新时代追求卓越再创辉煌	彩万志 (1)
中国蝗虫学研究60年	康乐 魏丽亚 (4)
中国转基因抗虫玉米的商业化策略	李国平 吴孔明 (17)
水稻病毒与植物寄主互作研究新进展	张合红 李雁军 孙宗涛 燕飞 陈剑平 (33)
农业生物多样性防控作物病害的研究进展	朱书生 黄惠川 刘屹湘 李成云 何霞红 朱有勇 (42)
锈菌效应子的研究现状与展望	郭嘉 钱朝伟 朱浩川 郭军 康振生 (58)
中国“十四五”重大病虫害防控综合技术研发实施展望	张凯 陈彦宾 张昭 杨礼胜 (69)
中国昆虫资源研究60年进展	姜轶杰 石志辉 张杰 朱芬 雷朝亮 (76)
我国落叶果树主要害虫及其防治技术60年研究进展	程杰 赵鹏 李建瑛 李贞 张松斗 李建成 刘小侠 (87)
农田节肢动物食物网结构与天敌控害功能	刘冰 陆宴辉 (97)
DNA分子检测技术在节肢动物食物网结构解析中的应用	杨帆 刘冰 陆宴辉 (110)
中国特色蝗灾治理技术体系及应用成效	张龙 游银伟 (118)
我国及毗邻国家重要蝗虫迁飞规律	涂雄兵 杜桂林 柴守权 朱景全 张泽华 (125)
昆虫紫外视觉研究进展	杨小凡 魏国树 马爱红 冉红凡 李建成 刘小侠 (131)
我国主要农作物蚜虫生物防治的研究进展、应用与展望	潘明真 张毅 曹贺贺 王杏杏 刘同先 (146)
我国农业害虫物理防治研究与应用进展	桑文 高俏 张长禹 黄求应 雷朝亮 王小平 (173)
植食性昆虫唾液调控昆虫-植物互作的研究进展	都慧 王晓伟 (184)
植物病毒经介体昆虫唾液腺水平传播至寄主初皮部机制的研究进展及展望	张洪祥 贾东升 陈倩 魏太云 (198)
昆虫共生菌调控宿主生长发育和生殖的研究进展	郑林宇 伦才智 柳丽君 李志红 (207)
昆虫共生微生物在病虫害防治的研究进展	张娜 赵曼 王关红 (220)
基于共生微生物及基因编辑技术对蚊虫防控进展	李维华 姜鹤 王关红 (231)
Signals and cues in death recognition: a quantitative review	Shi Jizhe Merchant Austin Wang Qinghua Zhou Xuguo (240)
小麦赤霉菌群体结构和病害监控技术研究进展	张昊 陈万权 (250)
小麦条锈病抗病遗传及菌源基地基因布局研究进展	冯晶 王凤涛 蔺瑞明 徐世昌 陈万权 (263)
我国玉米南方锈病研究进展	马占鸿 孙秋玉 李磊福 张克瑜 高建孟 董佳玉 (276)
Origins and spread of plant fungal and oomycete disease outbreaks	Xu Jianping (283)
作物病害监测预警研究进展	胡小平 户雪敏 马丽杰 黄冲 周益林 徐向明 (298)
基于人工智能的作物病害识别研究进展	周长建 宋佳 向文胜 (316)
我国土壤熏蒸消毒60年回顾	曹焯程 方文生 李园 颜冬冬 王秋霞 郭美霞 黄斌 宋兆欣 靳茜 (325)
棉铃虫对化学杀虫剂的抗性现状及分子机制研究进展	黄云 吴沛卓 郑钧月 张瑜 邱立红 (336)
重大实蝇类昆虫解毒代谢基因的研究进展	李欣莲 齐易香 陆永跃 (351)
纳米农药及载体材料的增效机理研究现状	闫硕 蒋沁宏 沈杰 (366)
ABC转运蛋白及其相关的多药抗性研究现状	孙铭优 吴照晨 王斌 王婷婷 李雪明 宋佳露 刘鹏飞 刘西莉 (374)
高通量测序技术在害虫和害螨抗药性研究中的应用	杨静 张愉英 高越 刘中芳 张鹏九 史高川 周序国 范仁俊 (383)
高效植保机械与精准施药技术进展	何雄奎 (389)
Current status and challenges of pesticide management in China	Zhang Hongjun Tao Lingme Liu Xu Zhou Xugu Huang Xiuzhu (398)
中国鼠害防控需求的差异、矛盾、挑战与对策	刘晓辉 (407)
中国草原鼠害防治现状、问题及对策	花立民 柴守权 (415)
我国蔬菜根结线虫发生、致害和绿色防控研究进展	金娜 陈永攀 刘倩 简恒 (424)

JOURNAL OF PLANT PROTECTION

2022 Vol. 49 No. 1

CONTENTS

Special Issue for the 60th Founding Anniversary

Plant protection has escorted Chinese food security over the last 60 years and will further pursue excellence in the new era	Cai Wanzhi (1)
Progress of acridology in China over the last 60 years	Kang Le, et al. (4)
Commercial strategy of transgenic insect-resistant maize in China	Li Guoping, et al. (17)
Recent advances in the studies of rice virus-plant host interaction	Zhang Hehong, et al. (33)
Research advances in agrobiodiversity for crop disease management	Zhu Shusheng, et al. (42)
Research progresses and prospects on the effectors of rust fungi	Guo Jia, et al. (58)
Research and development of techniques for integrated control of major diseases and insect pests during the Fourteenth Five-Year Plan in China	Zhang Kai, et al. (69)
Research advances in insect resources during the past 60 years in China	Jiang Yijie, et al. (76)
Advances in pest control of deciduous fruit trees over the past 60 years in China	Cheng Jie, et al. (87)
Arthropod food web structure and the biocontrol services of natural enemies in agro-ecosystems	Liu Bing, et al. (97)
Application of DNA-based molecular detection techniques in arthropod food web structure analyses	Yang Fan, et al. (110)
Technical systems for locust and grasshopper management with Chinese features and their success in application	Zhang Long, et al. (118)
Migration dynamics of important locust species in China and adjacent countries	Tu Xiongbing, et al. (125)
Research advances in ultraviolet vision in insects	Yang Xiaofan, et al. (131)
Research progresses, application, and prospects in aphid biological control on main crops in China	Pan Mingzhen, et al. (146)
Researches and applications of physical control of agricultural insect pests in China	Sang Wen, et al. (173)
Regulation of insect-plant interactions by herbivorous insect saliva	Du Hui, et al. (184)
Research advances and prospects for the mechanisms of horizontal transmission of plant virus via salivary glands of insect vectors to host phloem	Zhang Hongxiang, et al. (198)
Influences of insect symbionts on host growth, development and reproduction: a review	Zheng Linyu, et al. (207)
Research progress on microbial symbionts against pest and disease	Zhang Na, et al. (220)
Advances in prevention and control of mosquito based on microorganisms symbiotic and gene editing	Li Weihua, et al. (231)
Signals and cues in death recognition: a quantitative review	Shi Jizhe, et al. (240)
Research progresses on population structure of pathogen and monitoring and controlling technology of <i>Fusarium</i> head blight in wheat	Zhang Hao, et al. (250)
Research progress on genetics of wheat stripe rust resistance and distribution of resistant genes in inoculum source areas	Feng Jing, et al. (263)
Research progresses of southern corn rust in China: a review	Ma Zhanhong, et al. (276)
Origins and spread of plant fungal and oomycete disease outbreaks	Xu Jianping (283)
Research progresses in monitoring and prediction of crop diseases	Hu Xiaoping, et al. (298)
Research progresses in artificial intelligence-based crop disease identification	Zhou Changjian, et al. (316)
Review on 60 years of soil fumigation and disinfestation in China	Cao Aocheng, et al. (325)
Status of resistance to chemical insecticides in cotton bollworm <i>Helicoverpa armigera</i> and research progresses on the molecular mechanisms	Huang Yun, et al. (336)
Advances for the metabolic detoxification genes in major Tephritidae species	Li Xinlian, et al. (351)
Current state of research in synergistic mechanisms of nanopesticides and their carriers	Yan Shuo, et al. (366)
Research status of ATP-binding cassette transporters and related multidrug resistance	Sun Mingyou, et al. (374)
Application of high-throughput sequencing in the study of acaricide resistance	Yang Jing, et al. (383)
Research and development of efficient plant protection equipment and precision spraying technology in China: a review	He Xiongui. (389)
Current status and challenges of pesticide management in China	Zhang Hongjun, et al. (398)
Discrepancy, paradox, challenges, and strategies in face of national needs for rodent management in China	Liu Xiaohui. (407)
Rodent pest control on grasslands in China: current state, problems and prospects	Hua Limin, et al. (415)
Research progresses in occurrence, diagnoses, pathogenic mechanisms and integrated management of vegetable root-knot nematodes in China	Jin Na, et al. (424)