



ISSN 0529-1542

CN 11-1982/S

植物保护 Plant Protection

植物保护

Plant Protection

全国中文核心期刊
中国科技核心期刊
RCCSE中国核心学术期刊
CSCD来源期刊



ISSN 0529-1542



9 770529 154201



主办

中国植物保护学会

China Society of Plant Protection

中国农业科学院植物保护研究所

Institute of Plant Protection, CAAS

3

第46卷

2020年6月

目 次

特约稿件

- 草地贪夜蛾对Bt玉米的抗性与治理对策思考 何康来, 王振营(1)
沙漠蝗生物学特性及防治技术研究进展 涂雄兵, 李 霜, 杜桂林, 等(16)

专论与综述

- 昆虫谷氨酸门控氯离子通道研究进展 孟祥坤, 杨雪梅, 戈惠臣, 等(23)

研究报告

- 灭字脊虎天牛CSP基因的鉴定、表达谱及XquaCSP7基因的功能研究 庄翔麟, 吉帅帅, 赵昱杰, 等(30)
刺萼龙葵种子中适宜内参基因的筛选 赵丹丹, 陈景超, 黄兆峰, 等(40)
小麦白粉病菌分生孢子田间传播的初步研究 刘 伟, 赵亚男, 韩翠仙, 等(47)
温度和外源激素对白蜡吉丁肿腿蜂翅型分化的影响 胡 帅, 王小艺, 杨忠岐, 等(52)
甘薯G病毒吉林分离物的全基因组序列测定与分析 马俊丰, 李小宇, 张春雨, 等(57)
海洋多黏类芽胞杆菌可湿性粉剂的研制 陈 茹, 曹雪梅, 吴海霞, 等(62)
两种水稻蛀茎害虫精氨酸激酶基因的克隆及序列分析 鲁艳辉, 郑许松, 田俊策, 等(70)
大葱水提物对辣椒疫病的控制作用及其活性成分分析 陈煜文, 何 超, 陈夕军, 等(78)
具铁载体活性病原细菌的筛选及铁摄取干预对其生长影响 何 翔, 张 庆, 李 楚, 等(85)
草地贪夜蛾幼虫龄期对自相残杀行为的影响 王道通, 张 蕾, 程云霞, 等(94)
草地贪夜蛾的产卵节律及其对不同介质的产卵选择性 金 涛, 林玉英, 马光昌, 等(99)
美新姬小蜂孤雌品系和两性品系未成熟期生活史比较 杨月梅, 杜素洁, 刘万学, 等(104)
海南橡胶树棒孢霉落叶病菌毒素蛋白基因检测与致病性分析 曲建楠, 陈 迪, 侯巨梅, 等(110)
2019年草地贪夜蛾灯诱监测应用效果 姜玉英, 刘 杰, 杨俊杰, 等(118)
云南核桃叶枯病病原鉴定及其生物学特性 樊炳君, 赵玉美, 陈俊珠, 等(123)
具防病并提高植物耐旱功能的小链霉菌HS57的筛选 牛红杰, 荆玉玲, 郭荣君, 等(131)
草莓应答炭疽菌侵染的转录组分析 陈 哲, 黄 静, 赵 佳, 等(138)
松树材小蠹*Xyleborus festivus* Eichhoff (Scolytinae: Xyleborini)在中国南方的发生及其共生真菌研究 李 猷, 林 伟, 唐 也, 等(147)
金莲花绿变植原体的分子鉴定 王 蓉, 陈炳蔚, 李 勇, 等(152)
番茄棒孢叶斑病病原鉴定及生物学特性研究 田守波, 朱为民, 朱龙英, 等(157)

基础知识

- 枣树重要害虫——枣星粉蚧和枣树皓粉蚧的识别 虞国跃, 周在豹, 王 合(163)

实验方法与技术

- QuEChERS-超高效液相色谱-串联质谱法同时测定大米、小麦和动物源食品中异丙隆及其代谢物脱甲基异丙隆残留 戴高臣, 吴小虎, 张 盈, 等(167)

- 双重RT-PCR法同步检测单头异沙叶蝉携带的两种小麦病毒 杜真真, 刘 艳, 王锡锋(175)
葡萄卷叶伴随病毒2实时荧光定量RT-PCR技术的检测应用 任 芳, 张尊平, 范旭东, 等(180)

研究简报

- 龟纹瓢虫对草地贪夜蛾卵和低龄幼虫的捕食作用 蒋 骏, 张熠扬, 王文文, 等(188)
云南派姬小蜂的发育起点温度和有效积温 马梦然, 曹 鹤, 申家轩, 等(194)
7种挥发性化合物对柑橘木虱引诱效果的评价 林姈蓓, 莫锦夏, 肖志沛, 等(198)

调查研究

- 湖北省小麦品种(系)对赤霉病、条锈病、白粉病和纹枯病的抗性评价 朱 光, 彭 敏, 刘 健, 等(204)
*Cf-2/Rcr3^{pm}*番茄品系对南方根结线虫的抗性测定 丁修恒, 王 暱, 李红梅, 等(210)
小麦赤霉病自动监测预警系统应用效果评价 宋 瑞, 王嘉荟, 袁冬贞, 等(215)
新疆鹰嘴豆壳二孢疫病病菌*Ascochyta rabiei*交配型、致病力及其对3种杀菌剂的敏感性测定 蔡 军, 马德英, 郁 帆, 等(220)
我国云南、湖北和山东葡萄产区霜霉病菌对甲霜灵的抗性检测 周连柱, 贾爽爽, 孔繁芳, 等(226)
3种引诱剂对松褐天牛成虫引诱效果比较 徐真旺, 王 芳, 项作周, 等(231)
草地贪夜蛾在安徽地区越冬能力初探 谢明惠, 钟永志, 陈浩梁, 等(236)
玉米田间关键因素对草地贪夜蛾性诱效果的影响 卢军帅, 卢冠霖, 王作慰, 等(242)
2019年湖北省草地贪夜蛾发生为害规律和监测技术探索 杨俊杰, 郭子平, 罗汉钢, 等(247)
云南省德宏州发现3种草地贪夜蛾幼虫寄生蜂 汤 印, 郭井菲, 王勤英, 等(254)
新疆棉花枯、黄萎病的发生现状及其快速分离技术 张国丽, 谢宗铭, 冯自力, 等(260)
我国向日葵列当发生危害现状调查 吴文龙, 姜翠兰, 黄兆峰, 等(266)
河南省漯河地区黏虫幼虫寄生性天敌种类记述 陈 琦, 张运栋, 侯艳红, 等(274)

技术与应用

- 5种芽前除草剂的防效及对高羊茅、草地早熟禾籽粒的影响 李 俊, 杨 义, 何亚丽, 等(278)
10种除草剂及组合对芨芨草的防效评价 李 炼, 胡警匀, 栗振义, 等(285)
臭氧对不同磷化氢抗性储粮害虫作用效果研究 孟宏杰, 陈 锐, 唐培安, 等(291)
不同喷雾助剂对稻田除草剂减量作用的研究 田志慧, 袁国徽, 高 萍, 等(297)
甲维盐·氯虫苯甲酰胺组合物对草地贪夜蛾室内毒力测定及田间防治效果 胡 飞, 苏贤岩, 胡本进, 等(303)

- 封面照片 沙漠蝗 *Schistocerca gregaria* 张龙摄
广 告 云南勐牛(308); 中保科技(封二); 《植物保护》(封三);
云南勐牛(封底)

CONTENTS

- Resistance evolution to Bt maize in the fall armyworm and consideration on IRM strategy in China HE Kanglai, WANG Zhenying(1)
- Research progresses in the biological characteristics and control techniques of the desert locust *Schistocerca gregaria* (Forsk., 1775) TU Xiongbing, LI Shuang, DU Guilin, et al(16)
- Research advances in insect glutamate-gated chloride channels MENG Xiangkun, YANG Xuemei, GE Huichen, et al(23)
- Identification and expression pattern of chemosensory protein genes from *Xylotrechus quadripes* Chevrolat (Coleoptera: Cerambycidae) and functional studies of *XquaCSP7* gene ZHUANG Xianglin, JI Shuaishuai, ZHAO Yujie, et al(30)
- Selection of suitable reference genes in *Solanum rostratum* seeds ZHAO Dandan, CHEN Jingchao, HUANG Zhaofeng, et al(40)
- A preliminary study on the dispersal of aerial conidia of *Blumeria graminis* f. sp. *tritici* in wheat fields LIU Wei, ZHAO Yanan, HAN Cuixian, et al(47)
- Effects of temperature and exogenous hormones on wing dimorphism of the parasitoid *Sclerodermus pupariae* (Hymenoptera: Bethylidae) HU Shuai, WANG Xiaoyi, YANG Zhongqi, et al(52)
- Complete genome sequencing and analysis of *Sweet potato virus G* isolate from Jilin, China MA Junfeng, LI Xiaoyu, ZHANG Chunyu, et al(57)
- Preparation of *Paenibacillus polymyxa* wettable powder CHEN Ru, CAO Xuemei, WU Haixia, et al(62)
- Cloning and sequence analysis of arginine kinase genes from two rice stem borer species LU Yanhui, ZHENG Xusong, TIAN Junce, et al(70)
- Control effect of the aqueous extract from *Allium fistulosum* on pepper phytophthora blight and its active components CHEN Yuwen, HE Chao, CHEN Xijun, et al(78)
- Screening of the pathogenic bacteria with siderophore-producing activity and the effect of intervention in iron uptake on its growth HE Xiang, ZHANG Qing, LI Chu, et al(85)
- Larval stage related cannibalism in the fall armyworm, *Spodoptera frugiperda* WANG Daotong, ZHANG Lei, CHENG Yunxia, et al(94)
- Oviposition rhythms of *Spodoptera frugiperda* and its oviposition preferences to different medium JIN Tao, LIN Yuying, MA Guangchang, et al(99)
- Comparison of life history during immature stage between thelytokous and arrhenotokous strains of *Neochrysocharis formosa* YANG Yuemei, DU Sujie, LIU Wanxue, et al(104)
- Isolation, identification of the cassiicolin and pathogenicity analysis of *Corynespora* leaf fall disease of *Hevea brasiliensis* in Hainan QU Jiannan, CHEN Di, HOU Jumei, et al(110)
- Trapping effect of searchlight-trap and light trap for the moth of *Spodoptera frugiperda* in 2019 JIANG Yuying, LIU Jie, YANG Junjie, et al(118)
- Identification and biological characteristics of a new pathogen causing the walnut leaf blight in Yunnan province FAN Bingjun, ZHAO Yumei, CHEN Junzhu, et al(123)
- Screening of *Streptomyces parvus* HS57 with the biocontrol function and ability to enhance the plant's tolerance to water shortage stress NIU Hongjie, JING Yuling, GUO Rongjun, et al(131)
- Transcriptomics analysis of strawberry response to *Colletotrichum theobromicola* infection CHEN Zhe, HUANG Jing, ZHAO Jia, et al(138)
- Xyleborus festivus* Eichhoff (Scolytinae: Xyleborini) in southern China: distribution, host range and symbiotic fungi LI You, LIN Wei, TANG Ye, et al(147)
- Molecular identification of *Trollius chinensis* virescence phytoplasma WANG Rong, CHEN Bingwei, LI Yong, et al(152)
- Identification of the pathogen from *Corynespora* leaf spot of tomato and research on its biological characteristics TIAN Shoubo, ZHU Weimin, ZHU Longying, et al(157)

- Identification of two mealybug pests of *Ziziphus jujuba*: *Helicoccus destructor* Borchsenius and *Crisicoccus ziziphus* Zhang et Wu (Hemiptera, Pseudococcidae) YU Guoyue, ZHOU Zaibao, WANG He(163)
- Simultaneous determination of isoproturon and its metabolite desmethyl-isoproturon in rice, wheat and animal foods by QuEChERS-UHPLC-MS/MS DAI Gaochen, WU Xiaohu, ZHANG Ying, et al(167)
- Simultaneous detection of two wheat viruses harbored by a single leafhopper (*Psammotettix alienus*) by duplex RT-PCR DU Zhenzhen, LIU Yan, WANG Xifeng(175)
- Application of a real-time quantitative RT-PCR for detection of *Grapevine leafroll-associated virus 2* REN Fang, ZHANG Zunping, FAN Xudong, et al(180)
- Predation of *Propylaea japonica* to the eggs and young larvae of *Spodoptera frugiperda* JIANG Jun, ZHANG Yiyang, WANG Wenwen, et al(188)
- Threshold temperature and effective accumulated temperature of *Pediobius yunnanensis* Liao MA Mengran, CAO He, SHEN Jiaxuan, et al(194)
- Evaluation of attraction effect of seven volatile compounds on *Diaphorina citri* Kuwayama LIN Jinbei, MO Jinxia, XIAO Zhipei, et al(198)
- Evaluation on resistance of wheat varieties (lines) to *Fusarium* head blight, stripe rust, powdery mildew and sharp eyespot in Hubei province ZHU Guang, PENG Min, LIU Jian, et al(204)
- Evaluation of resistance in tomato lines with genotype *Cf-2/Rcr3^{pim}* to *Meloidogyne incognita* DING Xiuheng, WANG Xuan, LI Hongmei, et al(210)
- Application effect evaluation of the automatic monitoring and warning system for *Fusarium* head blight SONG Rui, WANG Jiahui, YUAN Dongzhen, et al(215)
- Determination of mating type, virulence of *Ascochyta rabiei* in Xinjiang and its sensitivity to three fungicides CAI Jun, MA Deying, YU Fan, et al(220)
- Detection of resistance of *Plasmopara viticola* to metalaxyl in grapevine areas of Yunnan, Hubei and Shandong in China ZHOU Lianzhu, JIA Shuangshuang, KONG Fanfang, et al(226)
- Comparison of trapping efficacy of three attractants to *Monochamus alternatus* adults XU Zhenwang, WANG Fang, XIANG Zuozhou, et al(231)
- Potential overwintering ability of fall armyworm *Spodoptera frugiperda* (J. E. Smith) in Anhui province XIE Minghui, ZHONG Yongzhi, CHEN Haoliang, et al(236)
- Effect of key factors on sexual trapping of *Spodoptera frugiperda* in corn field LU Junshuai, LU Guanlin, WANG Zuowei, et al(242)
- Research on the law of infestation and monitoring technology of *Spodoptera frugiperda* in Hubei province in 2019 YANG Junjie, GUO Ziping, LUO Hangang, et al(247)
- Three larval parasitic wasps of *Spodoptera frugiperda* were found in Dehong prefecture of Yunnan province TANG Yin, GUO Jingfei, WANG Qinying, et al(254)
- Occurrence of cotton *Fusarium* and *Verticillium* wilt in Xinjiang and the rapid isolation method ZHANG Guoli, XIE Zongming, FENG Zili, et al(260)
- Investigation of present occurrence and infestation of *Orobanche cumana* Wallr. in China WU Wenlong, JIANG Cuilan, HUANG Zhao Feng, et al(266)
- The note of parasitic species of *Mythimna separata* (Walker) larva in Luohu area of Henan province CHEN Qi, ZHANG Yundong, HOU Yanhong, et al(274)
- Control effects of five preemergence herbicides on weeds and seed production of *Festuca elata* & *Poa pratensis* LI Jun, YANG Yi, HE Yali, et al(278)
- Evaluation of control effects of 10 herbicides and their combinations on *Achnatherum splendens* LI Lian, HU Jingyun, LI Zhenyi, et al(285)
- Efficacy of ozone against stored grain insects with different resistance to phosphine MENG Hongjie, CHEN Rui, TANG Peian, et al(291)
- Effects of different spray adjuvants on the reduction of herbicide application in rice fields TIAN Zhihui, YUAN Guohui, GAO Ping, et al(297)
- Toxicities and field control efficacy of the mixtures of emamectin benzoate and chlorantraniliprole to *Spodoptera frugiperda* HU Fei, SU Xianyan, HU Benjin, et al(303)