

Indexed in SCI

Available online at www.sciencedirect.com

ScienceDirect

Review

- Natural nematicidal active compounds: Recent research progress and outlook** 2015
CHEN Ji-xiang, SONG Bao-an

Crop Science

- Improving grain appearance of erect-panicle japonica rice cultivars by introgression of the null *gs9* allele** 2032

ZHAO Dong-sheng, LIU Jin-yu, DING Ai-qiu, ZHANG Tao, REN Xin-yu, ZHANG Lin, LI Qian-feng, FAN Xiao-lei, ZHANG Chang-quan, LIU Qiao-quan

- Comparative transcriptome analysis of different nitrogen responses in low-nitrogen sensitive and tolerant maize genotypes** 2043

DU Qing-guo, YANG Juan, Shah SYED MUHAMMAD SADIQ, YANG Rong-xin, YU Jing-juan, LI Wen-xue

- Identification of blast-resistance loci through genome-wide association analysis in foxtail millet (*Setaria italica* (L.) Beauv.)** 2056

LI Zhi-jiang, JIA Guan-qing, LI Xiang-yu, LI Yi-chu, ZHI Hui, TANG Sha, MA Jin-feng, ZHANG Shuo, LI Yan-dong, SHANG Zhong-lin, DIAO Xian-min

- Comparison of grain yield and quality of different types of japonica rice cultivars in the northern Jiangsu plain, China** 2065

BIAN Jin-long, REN Gao-lei, XU Fang-fu, ZHANG Hong-cheng, WEI Hai-yan

- Lignin metabolism regulates lodging resistance of maize hybrids under varying planting density** 2077

LI Bin, GAO Fei, REN Bai-zhao, DONG Shu-ting, LIU Peng, ZHAO Bin, ZHANG Ji-wang

- Effects of plant density and nitrogen rate on cotton yield and nitrogen use in cotton stubble retaining fields** 2090

WANG Shi-hong, MAO Li-li, SHI Jia-liang, NIE Jun-jun, SONG Xian-liang, SUN Xue-zhen

Horticulture

- Mapping and predicting a candidate gene for flesh color in watermelon** 2100

WANG Chao-nan, LUAN Fei-shi, LIU Hong-yu, Angela R. DAVIS, ZHANG Qi-an, DAI Zu-yun, LIU Shi

- Genome-wide identification, molecular evolution, and expression divergence of the hexokinase gene family in apple** 2112

ZHU Ling-cheng, SU Jing, JIN Yu-ru, ZHAO Hai-yan, TIAN Xiao-cheng, ZHANG Chen, MA Feng-wang, LI Ming-jun, MA Bai-quan

- Preharvest application of melatonin induces anthocyanin accumulation and related gene upregulation in red pear (*Pyrus ussuriensis*)** 2126

SUN Hui-li, WANG Xin-yue, SHANG Ye, WANG Xiao-qian, DU Guo-dong, LÜ De-guo





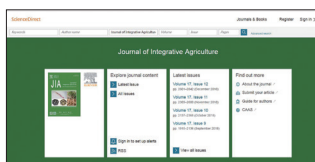
Sponsored by CAAS

© 2021, Chinese Academy of Agricultural Sciences (CAAS). All rights reserved. Submission of a manuscript implies that the submitted work has not been published before (except as part of a thesis or lecture note or report, or in the form of an abstract); that it is not under consideration for publication elsewhere; that its publication has been approved by all co-authors as well as by the authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors hand over the transferable copyrights of the accepted manuscript to CAAS, and that the manuscript or parts thereof will thus not be published elsewhere in any language without the consent of the copyright holder. Copyrights include, without spatial or timely limitation, the mechanical, electronic and visual reproduction and distribution; electronic storage and retrieval; and all other forms of electronic publication or any other types of publication including all subsidiary rights.



Co-sponsored by CAASS

The electronic full texts are available on ScienceDirect: <http://www.sciencedirect.com/science/journal/20953119>



Genome-wide identification and expression analysis of *Argonaute* gene family from longan embryogenic callus 2138
CHEN Rong-zhu, SHEN Xu, ZHANG Shu-ting, ZHAO Hua, CHEN Xiao-hui, XU Xiao-ping, HUO Wen, ZHANG Zi-hao, LIN Yu-ling, LAI Zhong-xiong

Plant Protection

The transcription factor FgNsf1 regulates fungal development, virulence and stress responses in *Fusarium graminearum* 2156
SHI Dong-ya, REN Wei-chao, WANG Jin, ZHANG Jie, Jane Ifunanya MBADIANYA, MAO Xue-wei, CHEN Chang-jun

Robust molecular detection of the new Tomato brown rugose fruit virus in infected tomato and pepper plants from Turkey 2170
Hakan FIDAN, Pelin SARIKAYA, Kubra YILDIZ, Bengi TOPKAYA, Gozde ERKIS, Ozer CALIS

Transcriptomic analysis reveals the transcription factors involved in regulating the expression of *EPSPS* gene, which confers glyphosate resistance of goosegrass (*Eleusine indica*) 2180
ZHANG Chun, YU Chao-jie, ZHANG Tai-jie, GUO Wen-lei, TIAN Xing-shan

Effects of inhibitors on the protease profiles and degradation of activated Cry toxins in larval midgut juices of *Cnaphalocrocis medinalis* (Lepidoptera: Pyralidae) 2195
YANG Ya-jun, XU Hong-xing, WU Zhi-hong, LU Zhong-xian

Identification and tissue distribution of odorant binding protein genes in *Harmonia axyridis* (Coleoptera: Coccinellidae) 2204
QU Cheng, WANG Ran, CHE Wu-nan, LI Feng-qi, ZHAO Hai-peng, WEI Yi-yun, LUO Chen, XUE Ming

Animal Science • Veterinary Medicine

Effects of formic acid and corn flour supplementation of banana pseudostem silages on nutritional quality of silages, growth, digestion, rumen fermentation and cellulolytic bacterial community of Nubian black goats 2214
ZHANG Hao, CHENG Xuan, Mabrouk ELSABAGH, LIN Bo, WANG Hong-rong

Kaempferol inhibits Pseudorabies virus replication *in vitro* through regulation of MAPKs and NF- κ B signaling pathways 2227
CHEN Xu, CHEN Ya-qin, YIN Zhong-qiong, WANG Rui, HU Huai-yue, LIANG Xiao-xia, HE Chang-liang, YIN Li-zi, YE Gang, ZOU Yuan-feng, LI Li-xia, TANG Hua-qiao, JIA Ren-yong, SONG Xu

Agro-Ecosystem & Environment

Nitrogen acquisition, fixation and transfer in maize/alfalfa intercrops are increased through root contact and morphological responses to interspecies competition 2240
SHAO Ze-qiang, ZHENG Cong-cong, Johannes A. POSTMA, LU Wen-long, GAO Qiang, GAO Ying-zhi, ZHANG Jin-jing

Functional diversity of soil microbial communities in response to supplementing 50% of the mineral N fertilizer with organic fertilizer in an oat field 2255
ZHANG Mei-jun, JIA Ju-qing, LU Hua, FENG Mei-chen, YANG Wu-de

Effects of long-term straw incorporation on nematode community composition and metabolic footprint in a rice-wheat cropping system 2265
CHEN Yun-feng, XIA Xian-ge, HU Cheng, LIU Dong-hai, QIAO Yan, LI Shuang-lai, FAN Xian-peng



<http://www.ChinaAgriSci.com>
 Submit online via ScholarOne
 Advance online publications are accessible

The impacts of oxytetracycline on humification during manure composting can be alleviated by adjusting initial moisture contents as illustrated by NMR
2277

FENG Yao, WANG Gui-zhen, LIU Yuan-wang, CHENG Deng-miao, FAN Shuang-hu, ZHAO Quan-sheng, Jianming XUE, ZHANG Shu-qing, LI Zhao-jun

Agricultural Economics and Management

African swine fever and meat prices fluctuation: An empirical study in China based on TVP-VAR model
2289

LI Hui-shang, HU Chen-pei, LÜ Zheng, LI Mei-qi, GUO Xin-zhu

Adoption of small-scale irrigation technologies and its impact on land productivity: Evidence from Rwanda
2302

Jules NGANGO, Seungjee HONG

COVER



Fusarium graminearum is a predominant causal agent of Fusarium head blight (FHB) or scab on staple food crops including wheat, barley and maize in most growing areas. In addition to severe yield and economic losses, *F. graminearum* produces mycotoxins such as deoxynivalenol (DON) and zearalenone (ZEA) in the infected grains, which pose serious threats to human and animal health. Due to the lack of highly efficient disease-resistant cultivars, fungicides play a prominent role of reliable FHB management. However, with the development of resistance against fungicides, the efficiency of chemical control has been adversely affected. In order to establish efficient management strategies, a clear understanding of the pathogenesis of this devastating fungus seems particularly important. Nutrient and stress factor 1 (Nsf1), a transcription factor containing the classical Cys2-His2 (C₂H₂) zinc finger motif, is expressed under non-fermentable carbon conditions and in response to salt stress in *Saccharomyces cerevisiae*. However, the role of Nsf1 in filamentous fungi is not well understood. In this study, the orthologue of Nsf1 was investigated in *F. graminearum* (named FgNsf1), and the roles of FgNsf1 were elucidated by constructing a deletion mutant and its functional complementation mutant. The photo, provided by Prof. Chen Changjun from the Nanjing Agricultural University, China, shows the symptoms of FHB in the field induced by *F. graminearum*. See pages 2156–2169 in details.