

## 研究报告

## Research Reports

# 我国北方玉米上平脐蠕孢属和弯孢属真菌及其所致叶斑病

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**摘要** 平脐蠕孢属(*Bipolaris*)和弯孢属(*Curvularia*)真菌可引起多种玉米叶斑病。为了解当前玉米生产上此类病害的发生情况,2014年8—9月对我国玉米主产区北京、河北、河南、黑龙江和吉林5省市玉米上疑似由该两属真菌引起的叶部病斑样品进行了采集,随后进行了真菌的分离和鉴定。共采集样品42份,根据其形状特点归为4类:长条形、椭圆形、小点状和梭形病斑。经组织分离获得平脐蠕孢属和弯孢属真菌28株,基于形态学和rDNA-ITS序列的系统发育分析共鉴定出5个种:玉蜀黍平脐蠕孢(*B. maydis*)、玉米平脐蠕孢(*B. zaeae*)、玉米生平脐蠕孢(*B. zeicola*)、新月弯孢(*C. lunata*)和穗状弯孢(*C. spicifera*)。从长条形病斑和椭圆形病斑上分离到的主要是*B. maydis*和*B. zeicola*,从小点状病斑分离到的主要是*C. lunata*,其次是*B. zaeae*。分离出*C. lunata*的样品病斑较为稀疏、颜色略浅、呈苍白色,分离出*B. zaeae*的样品病斑更为密集、颜色较深。从梭形病斑分离到的是*C. spicifera*。有少数样品可分离到上述两种菌。采用孢子悬浮液喷雾法对温室玉米苗接种,上述5种真菌均可致病。以接种*B. maydis*发病最快,发病最重;接种*B. zeicola*、*C. lunata*或*C. spicifera*发病较慢,症状明显;接种*B. zaeae*发病最慢,仅引起小点状病斑。研究结果可为玉米叶斑病的正确诊断提供资料和依据。

**关键词** 玉米; 叶斑病; 诊断; 平脐蠕孢; 弯孢

中图分类号: S 435.13 文献标识码: A DOI: 10.3969/j.issn.0529-1542.2016.05.006

## *Bipolaris* and *Curvularia* species associated with corn leaf spot in northern China

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**Abstract** Several species of *Bipolaris* and *Curvularia* can cause common corn leaf spot. To investigate current corn diseases caused by these fungal species, we collected the suspected samples of corn leaf spot caused by species of the two genera from five provincial regions, including Beijing, Hebei, Henan, Heilongjiang, and Jilin, the main corn-growing areas in China in August to September in 2014. Then the fungi were isolated and identified. A total of 42 collected samples were divided into four types based on the form of the lesions: elongate, elliptic, speckle, and spindle. Twenty-eight strains of *Bipolaris* and *Curvularia* were obtained by the tissue isolation method, and identified as *B. maydis*, *B. zaeae*, *B. zeicola*, *C. lunata* and *C. spicifera* based on their morphological characteristics and the phylogenetic analysis of rDNA-ITS sequences. The strains isolated from the elongate and elliptic lesions were mainly *B. maydis* and *B. zeicola*. The strains isolated from the speckle lesions were mostly *C. lunata*, followed by *B. zaeae*. The lesions were sparse and pale on the samples with *C. lunata* isolated, and serried and dark on the samples with *B. zaeae* isolated. The strains isolated from the spindle lesions were *C. spicifera*. There were a few samples with two fungal species being isolated from the same sample. All the five fungal species

收稿日期: 2015-11-13

修订日期: 2015-12-28

基金项目: 国家“863”计划课题(2013AA102801, 2013AA102802); 国家微生物资源平台(NIMR)

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