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林学—研究报告

麻疯树枝枯病病原鉴定及生物学特性测定

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摘要：

为了确定麻疯树枝枯病的病原及致病性，笔者通过形态和分子的方法鉴定出麻疯树枝枯病病原菌为Lasiodiplodia theobroma，查阅分析相关资料发现其是一种新病害，因此采用文字和插图方法对病害进行详细描述。结果表明，引起麻疯树枝枯病的病原为Lasiodiplodia theobroma，在此基础上完成病原菌生物学特性测定，发现病原菌是一种弱致病性真菌，在温度为28~30℃，pH值为6~7，培养基以葡萄糖、蔗糖、酵母粉为营养源的条件下利于病原菌营养生长；在温度为20~30℃，pH值为7，湿度在90%~100%，灭菌水的条件下病原菌孢子都能够正常萌发，其中光照刺激利于病原菌孢子的形成；测定还发现，病原菌对丙唑-多菌灵最敏感，而对苯醚甲环唑、链霉素、百菌清、乙蒜素、丙环唑、环胺类农药不敏感。病原菌生物学特性表明其非常适合干热河谷地理环境，能够在土壤和枯枝落叶中广泛存在。因此，预测病原菌在干热河谷环境中初侵染接种体数量大，一旦大量寄主受伤，雨水充足病害极易爆发成灾，建议防治病害一方面要消除寄主树势衰弱的诱因，减少病害发生侵染的机会，另一方面要科学合理地施用农药。

关键词： 生物学特性

Identification on Pathogen of Branch Rot of Jatropha curcas and Study on its Biological Characteristics

Abstract:

In order to identify the pathogeny and pathogenicity of branch rot of Jatropha curcas. Branch rot of Jatropha curcas caused by Lasiodiplodia theobroma was reported, illustrated and literal description was given in detail based on the materials from YuanMo, Yunnan in China. Morphological and molecular data were taken into consideration when the pathogen was authenticated. In view of available references, the author thought that was the first report about it. The author gained some results after finished the study about the biological characters of pathogen, pathogen grow actively in the condition of 28-30℃, pH=5-7, the culture medium with C6H12O6, C12H24O12, yeast powder. Sporegermination was more active in the condition of 20-30℃, pH=6, humidity (90%-100%), sterile water. It can produce a few spore and spore apparatus under light. Mycelial growth was significantly inhibited in PDA plate which contained Propiconazol Carbendazim, at the same time, the interesting phenomenon was found that mycelial was fast growing in the PDA plate which contained Difenoconazole, Streptomycin, Chlorothalonil, Ethylicin, Propiconazole, etc. That was like in the PDA plate. The author thought this disease was rampant when hosts were wounded and ecology environment was high humidity based on analyzing biological nature of pathogen and ecology environment of host. After that the author had some good ideas about disease prevention and cure which disease should mainly be prevented and the use of pesticides scientifically must be adopted.We gained some results after finished the study about the biological characters of pathogen, pathogen grow actively in the condition of 28-30℃, pH=5-7, the Czapek culture medium with C6H12O6, C12H24O12, yeast powder. Sporegermination is more active in the condition of 20-30℃, pH=6, humidity=90-100%, sterile water. It can produce a few spore and spore apparatus under light. Mycelial growth was significantly inhibited in PDA plate which is contains Propiconazol Carbendazim, at the same time, the intertesting phonomenon was found that mycelial is fast growing in the PDA plate which is contains Difenoconazole, Streptomycin, Chlorothalonil, Ethylicin, Propiconazole, et. That is like in the PDA plate. We think this disease is will rampant when hosts ware wounded and ecology environment is high humidity based on analyze biological nature of pathogen and ecology environment of host. After that we have some good ideas about disease prevention and cure which is disease should mainly be prevented and scientifically use pesticides must be adopted.

Keywords: biological characteristics

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