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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 29588-2013

Detection and identification of *Mycosphaerella dearnessii* Barr

松针褐斑病菌检疫鉴定方法

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Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Standardization Technical Committee of Plant Quarantine (SAC/TC271) and focal points. This standard was drafted. People's Republic of China Anhui CIQ, People's Republic of China Entry-Exit Inspection and Quarantine Bureau. The main drafters of this standard. Yao Jian, Liaotai Lin, Wen Jinsong, Zhenghai Song, Li Gang, Yu Xiaofeng, Zhang Ping, Li Baisheng, Li Yunfei, Sunjuan Juan, Fang Yuan Wei, Dai Lei, YU Li Fan. Quarantine and identification of Brown Spot Needle Blight

1 Scope

China's national method for the quarantine detection and identification of *Mycosphaerella dearnessii* Barr, the cause of brown spot needle blight of pine. It specifies the detection and identification method for the fungus and applies to the quarantine identification of the disease on pine seedlings, branches and needles. Brown spot needle blight attacks the needles of pines. Infected needles develop brown spots that expand into bands, the needle dies from the tip back, and a heavily infected tree loses most of its foliage. A conifer that loses its needles repeatedly loses the photosynthetic capacity it needs to grow, and repeated defoliation over several seasons kills it. The disease is most serious on young trees and in nurseries, which is where the quarantine interest lies: it moves on planting material, and a nursery that ships infected seedlings distributes it across a planting programme. For a country with the scale of afforestation China has undertaken, and with large areas of susceptible pine, the arrival of a needle disease in the nursery system is a serious matter. The detection problem is that the symptoms on a needle are not distinctive enough to identify the organism. A great many fungi produce spots and bands on conifer needles, some pathogenic and most not, and telling them apart requires the fruiting bodies and the spores. Those may not be present on the material as received, and the fungus is slow-growing in culture and easily overgrown. So the standard covers the examination of the material, the incubation that induces fruiting where it is absent, the isolation onto media,

the microscopic examination of the fruiting bodies and conidia, and the characters that separate this species from the other needle-inhabiting fungi. Issued on 19 July 2013 and in force since 6 December 2013.

This standard specifies the method for inspection and identification of Brown Spot Needle Blight. This standard applies to pine (*Pinus*) seedlings, quarantine and identification of branches and leaves Brown Spot Needle Blight.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document. SN/T 2122 entry and exit quarantine of plants and plant products sampled

3 Basic information of Brown Spot Needle Blight

Chinese name. Brown Spot Needle Blight. Name. *Mycosphaerelladearnessii*Barr.
Synonyms. *Scirrhiaacicola* (Dearness) Siggers, *Systemmaacicola* (Dearness) Wolf Fungi industry Fungi, Ascomycotina Ascomycota, chamber Proteobacteria Loculoascomycetes, seat capsule bacteria Head Dothideales, seat bag Bacteria Branch Dothideaceae, ball cavity genus *Mycosphaerella*. Its asexual type of imperfect fungi Amon Deuteromycotina, Coelomycetes Coe- lomyces, black plate spore head Melanconiales, black Colletotrichum Branch Melanconiaceae, seat Colletotrichum *Lecanosticta* in *Lecanosticta acicola* (Thümen) SydowetPetrak [Synonyms. *Lecanostictapini*Sydow, *Septoriaacicola* (Thümen) Sac- cardo]. Brown Spot Needle Blight in fruiting bodies and mycelia lesion tissue in diseased leaves on the trees or diseased leaves fall in winter, occasionally in their sexual type withered On and off the needles. For additional information, see Appendix A. The Brown Spot Needle Blight

4 Principle of the method

The field inspection, after sampling, microscopes and other laboratory equipment for testing, according to the results of its damage symptoms, morphological characteristics determination.

5 Instruments and appliances

5.1 Instrument Microscope, clean benches, incubators, autoclaves.

5.2 Appliances Scalpels, scissors, tweezers, magnifying glass.