has been observed on oil palms of all ages but generally flourishes on palms below 10 years of age.

The pathogen was isolated on potato dextrose agar medium and the pathogenicity was confirmed on oil palm by artificially inoculating healthy plants with a 15-day-old culture of the fungus. The pathogen established infection within 3–5 days when inoculated with or without puncturing. The fungus was identified as *Colletotrichum gloeosporioides* Penz.

Leaf rot disease is a new record from India on oil palm.

4 July 1988; Revised 15 October 1988

TWO NEW LEAF SPOT DISEASES FROM INDIA CAUSED BY *ALTERNARIA*

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TWO new leaf spot diseases caused by *Alternaria cassiae* Jurair & Khan and *A. pruni* McAlpine, associated with *Bauhinia purpurea* and *Prunus amygdalis* respectively, have been reported for the first time from India. The collections have been deposited in the herbarium of the Botany Department, Punjabi University, Patiala, and in the herbarium of CMI, Kew, England.

1. Leaf spot disease of *Bauhinia purpurea* Linn. caused by *A. cassiae* Jurair & Khan, Fresen, *Pak. J. Sci. Ind. Res.*, 1960, 3, 71 (figure 1a, b).

Symptoms were observed on the leaves. The infection is in the form of blackish brown spots, distinct and well-demarcated from the healthy tissue, prominent on both sides of the leaf. The infected portions turn brown.

Conidiophores 32–160 × 4–5.4 μm, thick-walled, brown, linear, cylindrical, unbranched, stout, transversely 1–7-septate, septa conspicuous, coming out of host tissue singly or in groups. Conidia 16–100 × 13–21 μm, dark brown, multicellular, muriform, conspicuous, septate with 3–8 transverse, 1–5 longitudinal and 1–6 oblique septa, slightly constricted at transverse septa, oval, cylindrical to obclavate, base obtuse, tapering towards the apex with dilated tip, formed in short chains.

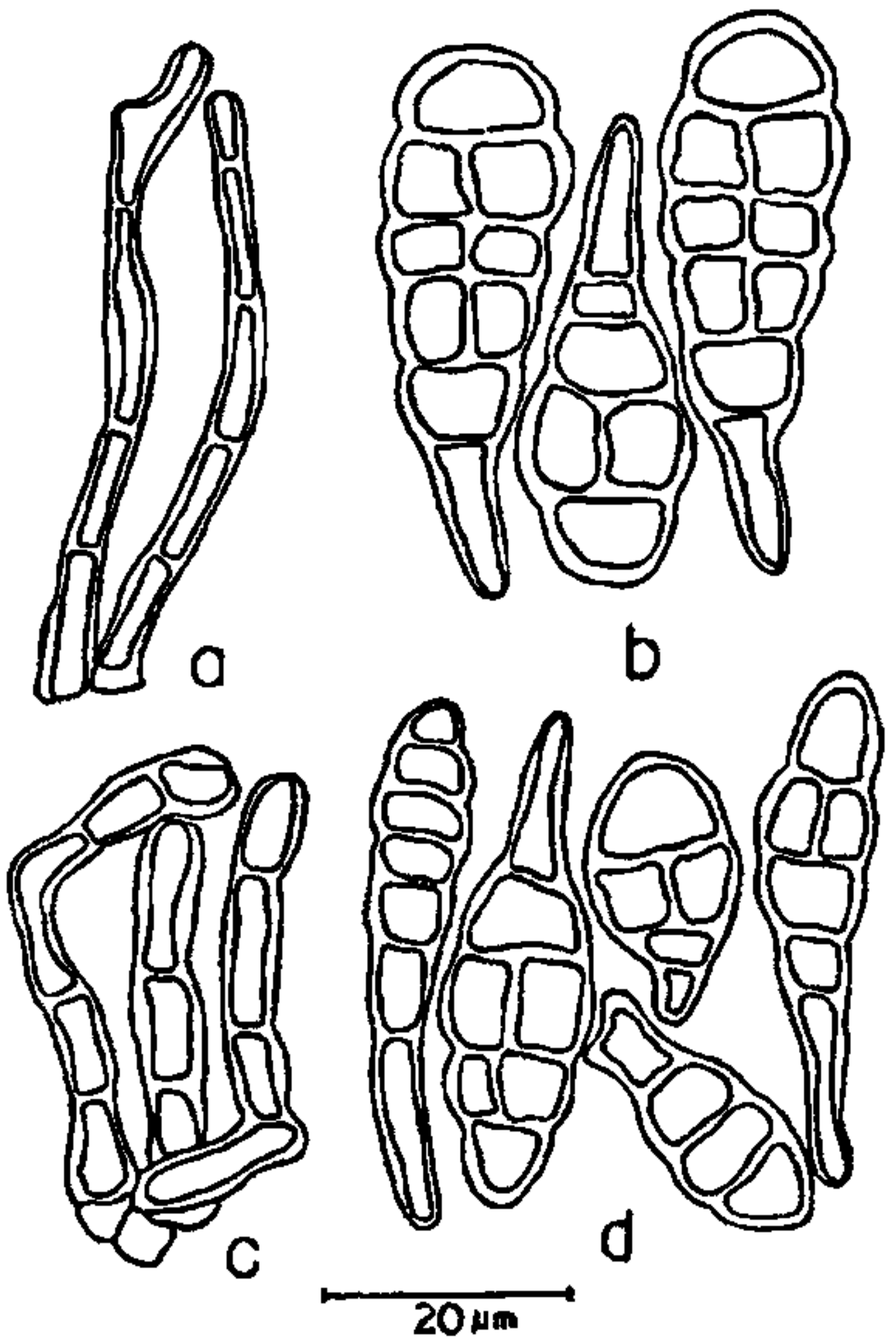

Figure 1. *Alternaria cassiae* Jurair & Khan: **a.** Conidiophores, **b.** Conidia; *Alternaria pruni* McAlpine: **c.** Conidiophores, **d.** Conidia.

Collection examined: Punjab; Patiala (250 m), Punjabi University, *Bauhinia purpurea* Linn. (Caesalpiniaceae), Jaswinder Kaur, PUN 715 and IMI 321818, Nov. 3, 1985.

A. cassiae is reported for the first time on *B. purpurea*. No species of *Alternaria* has so far been reported on this host[1–3].

2. Leaf spot disease of *Prunus amygdalis* Batsch caused by *A. pruni* McAlpine, *Fungus diseases of stone fruit trees*, Melbourne, 1902, p. 102, (figure 1c, d).

Leaf spots 3–6 mm in diameter, circular, dark brown, without concentric rings, scattered but more towards the margin.

Conidiophores 49–84 × 4–8 μm, light brown, come out of stomata singly or in groups, usually with one conidial scar. Conidia 24–55 × 8–14 μm, light brown, elongated with one-celled beak, obclavate, with 3–6 transverse and 1–2 longitudinal septa, conidial scar absent.

Collection examined: Punjab; Patiala (250 m), Baradari Gardens, *Prunus amygdalis* Batsch (Rosaceae), Mohd. Ramzan, PUN 172 and IMI 321820, Oct. 14, 1979.

A. pruni is reported for the first time from India on this host. No species of *Alternaria* has been known to occur on *Prunus amygdalis*[1-3]

Thanks are due to Mr J. David of CMI, Kew, England, for identification of the *Alternaria* species.

11 July 1988; Revised 8 September 1988

1. Bilgrami, K. S., Jamaluddin and Rizwi, M. A., *Fungi of India, Parts I & II*, Today & Tomorrow's Printers & Publishers, New Delhi, 1979.
2. Mukerji, K. G. and Bhasin, Jayanti, *Plant diseases of India, A source book*, Tata McGraw-Hill Publishing Company, New Delhi, 1986.
3. Sarbhoy, A. K., Agarwal, D. K. and Varshney, J. L., *Fungi of India (1977–81)*, Associated Publishing Company, New Delhi, 1986.

A NEW REPORT OF *RHIZOPUS* ROT OF GROUNDNUT FROM INDIA

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DURING a survey in 1985 and 1986, a serious pre- and post-emergence seedling rot of groundnut (*Arachis hypogaea* L.) was observed in Sri Ganganagar district. Infected plants can be easily identified by the stunted growth, and on uprooting such plants necrosis is usually seen just below the cotyledonary axis. Mats of mycelium and a black mass of spores may be seen on necrotic tissues. If the plumule and cotyledonary laterals are completely destroyed, the seedling usually died. In some cases even older plants were found to bear disease symptoms. The disease was also observed on seeds sown in moist plots.

Samples from infected plants and seeds were collected and small bits of infected parts along with healthy areas were cut and surface-sterilized in mercuric chloride (0.1%) for one and a half min, washed thrice in sterile water, and transferred to petri dishes containing potato dextrose agar medium. Plates were incubated at 30°C for 5 days. Pathogenicity of the causal organism was tested successfully on groundnut cultivar M-13. Three kg of sterilized soil was inoculated with 150 g of soil maize medium containing 7-day-old culture. Healthy seeds of the same cultivar were also inoculated with a spore suspension containing 9×10^4 spores/ml from the same culture. Typical symptoms of the disease were observed on inoculated seeds two days after sowing. Reisolation from infected parts yielded the same pathogen. The pathogen was identified as *Rhizopus oryzae* Went and Prinsen Geerligs (IMI No. 299372).

R. nigricans and *R. arrhizus* were found to be associated with rot of groundnut in India[1,2] but *R. oryzae* causing pre- and post-emergence seedling rot has not been reported earlier.

The authors are grateful to Dr P. M. Kirk, CMI, England, for identification of the pathogen.

16 September 1987; Revised 7 October 1988

1. Chohan, J. S. and Gupta, V. K., *Indian J. Agric. Sci.*, 1968, **38**, 568.
2. Rao, V. G., *Mag. Coll. Agric. Dhulia*, 1963, **2**, 53.

SUSCEPTIBILITY OF RICE SHEATH BLIGHT PATHOGEN TO MYCOPARASITES

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BIOCONTROL through the use of resident and introduced antagonists has of late gained importance and is poised for successful application in modern agriculture[1]. Among the many potentially antagonistic soil inhabitants, members of the genera *Gliocladium* and *Trichoderma* have gained considerable importance as biocontrol agents[2], and plant growth enhancement by *Trichoderma* spp. has also been reported[3]. Mycoparasitism of rice sheath blight incitant *Rhizoctonia solani* by *Trichoderma* spp.[4,5] and *Gliocladium* sp.[6] is known. The antagonistic potential of *G. virens* and *T. longibrachiatum* isolated from rice field soils to *R. solani*, their morphological interactions and the associated physiological mechanisms are reported here.