

RESEARCH NOTE

Botryodiplodia stem-end rot of lime fruits A new disease in India

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Botryodiplodia and *Diplodia* spp. are known to infect several crops of economic importance. While *Diplodia natalensis* has been reported on lime fruits by Patel *et al.* (1949) from India, no report of the incidence of *Botryodiplodia* stem-end rot could be traced from the available literature. The disease was observed in a severe form in the fruit markets of Jaipur in 1969. The disease was reproduced in healthy fruits by stem-end inoculation of 48 hours old monoconidial culture of the fungus.

Typical symptoms of the disease are the softening and light brown colouration of the peel tissues around the stem-end. The colour gradually changes to dark brown and the rot rapidly spreads downwards engulfing the whole fruit within three to four days. (Fig. 1).

The morphological characters of the fungus are as follows : Pycnidia, brown to black, globose to sub-globose on the surface of culture media, usually in groups of 3 to 6 (Fig. 2 A). Shape of pycnidia varies from sub-globose to pyriform and their size varies from 135—180 × 216—480 μ . The fungus produces two types of conidia. Conidia in early stages are hyaline, thin walled, single-celled and round to oval in shape (Fig. 2 B). With the advance in age the spores become olive-brown, thick-walled and bicelled. Both cells are almost equal or one cell slightly smaller than the other. Shape of these spores is ovate to elliptical. Bicelled conidia have longitudinal striations on their surface which vary from 4 to 6. Size of single and bicelled conidia (Fig 2 C) are 12—15 × 17—28 μ and 13—15 × 20.5—32 μ respectively.

On the basis of morphological characters of pycnidia, presence of stroma, size and shape of spores and presence of longitudinal striations on bicelled spores, the pathogen under study was identified as *Botryodiplodia theobromae* Pat. The identification of the fungus was confirmed by CMI Kew, Surrey (IMI 141578).

REFERENCES

- PATEL, M. K., M. N. KAMAT AND V. P. BHIDE (1949)—Fungi of Bombay, Supplement 1. *Indian Phytopath* 2 : 142—155.

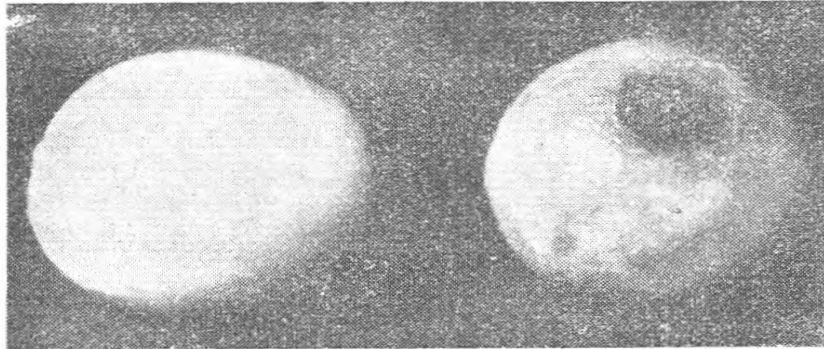


Fig. 1—Healthy and diseased lime fruits.

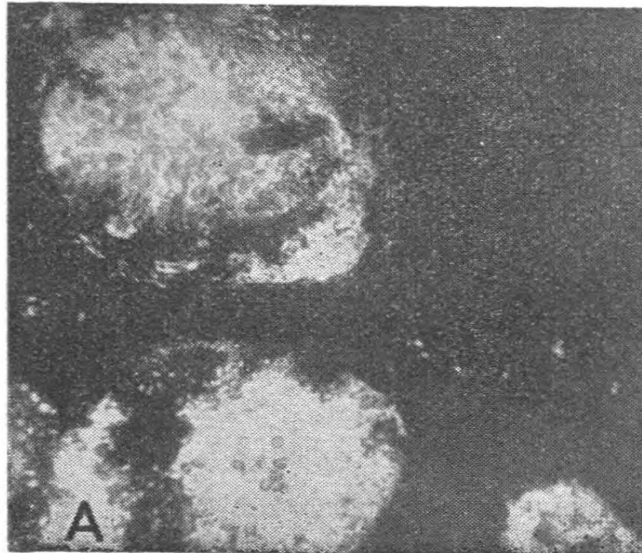


Fig. 2(A)—T. S. of stroma showing group of pycnidia.

BOTRYODIPLODIA SLEM-END ROT OF LIME FRUITS

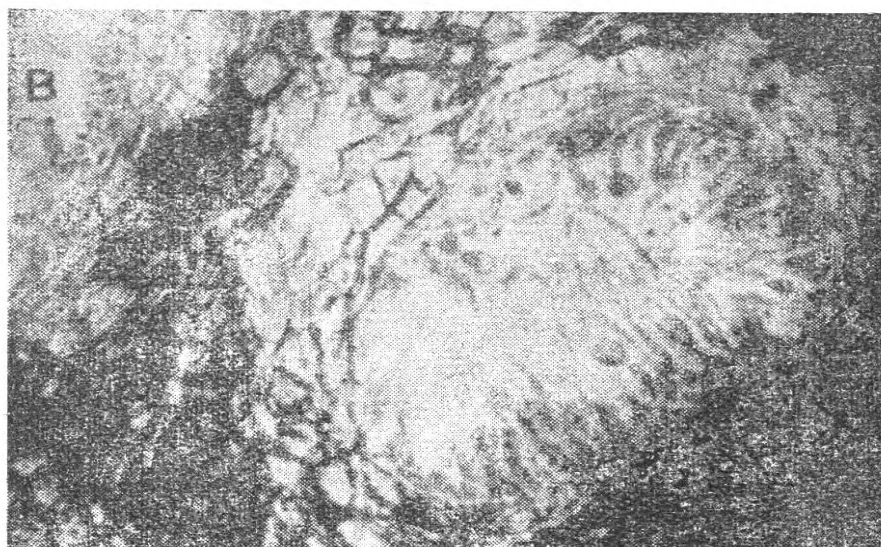


Fig. 2(B)—L. S. of a pycnidium

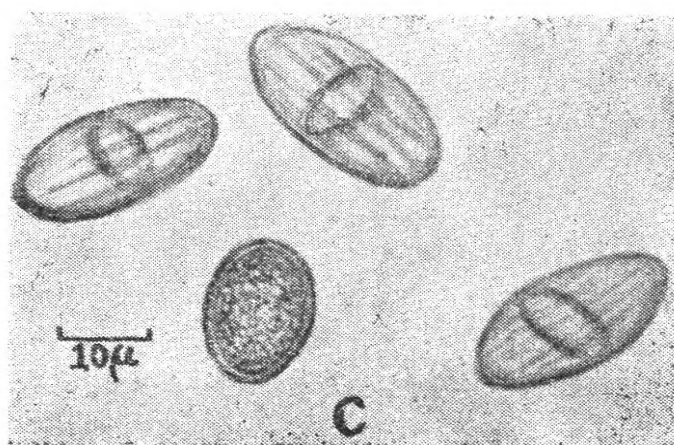


Fig. 2.(C)—Pycnidiospores of *Botryodiplodia theobromae*

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