SHORT COMMUNICATION

J. Mycopathol. Res. *34*(2) : *157-158 (1996) Printed in India*
© The Indian Mycological Society, Department of Botany, Calcutta University, Calcutta - 700 019, India

A new post-harvest disease of banana

B. P. SADHU[1], A. B. DE[2] AND K. GUPTA[1]

[1] *Department of Botany, Burdwan University, Burdwan - 713 104, West Bengal and*
[2] *Department of Botany, Burdwan Raj College, Burdwan - 713 104, West Bengal*

During October 1990, fruits of banana (Singapuri var. Kabuli) with a new type of rot were noticed and collected from different markets of Burdwan (West Bengal, India). Survey revealed that 40-45% of the fruits examined are suffering from this post-harvest disease. The pathogen was isolated from the pulp of the infected fruits in axenic culture and was identified as *Penicillium citrinum* Thom. The culture has been deposited in C.M.I., Kew, England (I.M.I.No.342480).

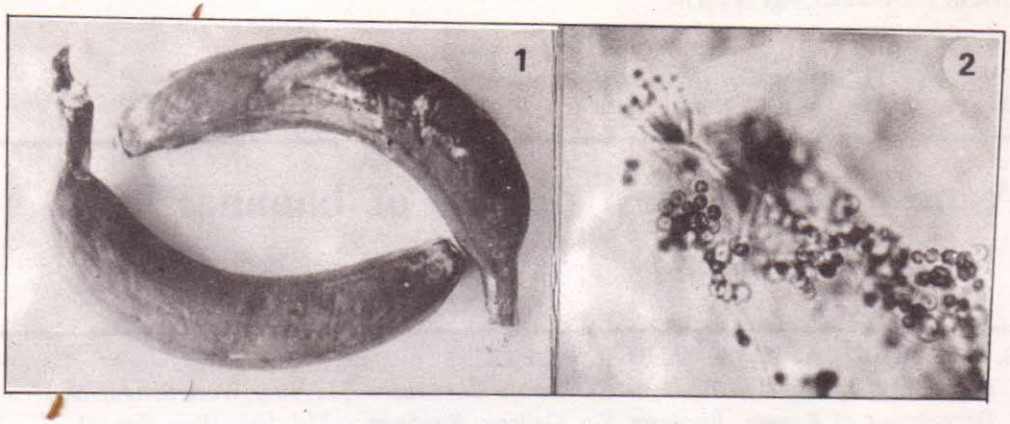
Symptom : The symptom appeared first as small brownish spots on the skin which rapidly enlarged and ultimately the affected skin become soft and black (Fig.1). The pulp was found as yellow, soft, shrivelled and water-soaked structure. The extent of rotting ranged from 35-40%, at times, the whole consignment was rendered unfit for consumption.

Diagnostic features of the pathogen : Rapid growht and profuse sporulation was observed on potato dextrose agar (PDA) medium. Colony was floccose to leathery, bluish-green to olive-green with sterile white margin.

The hyphae were thin-to very slightly thick-walled, hyaline, septate, profusely branched, 2.0-2.5 µm in diam.; conidiophores (Fig.2) were unbranched, up to 200 µm long and 2.2-3.0 µm wide ; penicilli were consisting of a terminal group of 3-5 metulae ; metulae were 16.0-30.0 × 2.2-3.0 µm, enlarged at the apex to 5.0 µm, each producing a cluster of 6-10 crowded phialides; phialides were 6.0-7.0 × 2.0-3.0 µm, bearing parallel conidial chains in columns of up to 150 µm long ; conidia (Fig.2) were globose, 2.4-3.0 µm in diameter, one-celled, green and smooth-walled to granular.

Pathogenicity test : Pathogenicity tests carried out with conidia from 6-days old culture resulted in the development of typical symptom 3-4 days after inoculation. Re-isolation from induced lesions established identify with the original isolate. The present note, therefore, makes an addition to the host index of *Penicillium citrinum* Thom.

Review of literature (Bilgrami *et al.*, 1979, 1981; Butler and Bisby, 1960; Chakravarti *et al.*, 1977; Dasgupta and Mandal, 1986; Frohlich and Rodewald, 1970; Mukerji and Juneja, 1975; Sarbhoy *et al.*, 1986; Tandon and Chandra, 1976; Westerrn, 1971) shows that so far



Figs 1-2. 1. Infected fruits of banana (Singapuri var. Kabuli) [x1/2]
2. Conidiophore and conidia of Penicillium citrinum Thrm. [x800]

there is no record of *P. citrinum* on the fruits of Singapuri var. Kabuli banana. The present note is the first record of the same from Burdwan, West Bengal, India.

The authors are grateful to Dr. B.C. Sutton, Royal Botanic Gardens, Kew, Richmond, Surrey, England for confirming the identification of the fungus. The authors are also grateful to I.C.A.R., New Delhi, India, for rendering financial assistance.

REFERENCES

Bilgrami, K.S., Jamaluddin and Rizwi, M.A. (1979, 1981). *Fungi of India* (Part I & II), Today and Tomorrow's Printers & Publishers, New Delhi, India.

Butler, E.J. and Bisby, G.R. (1960). *The Fungi of India* (Revised by R.S. Vasudeva), I.C.A.R., New Delhi, India.

Chakravarti, N., Chattopadhyay, N.C. and Nandi, B. (1977). A new fruit rot disease of Singapuri variety of Banana. *Curr. Sci.*, *46*(3) : 93.

Dasgupta, M.K. and Mandal, N.C. (1986). *Post harvest Pathology of Perishables*, Oxford & IBH, Calcutta, India.

Frohlich, G. and Rodewald, W. (1970). *Pests and diseases of tropical crops and their control*, Pergamon Press, Oxford.

Mukherji, K.G. and Juneja, R.C. (1975). *Fungi of India*, Suppl., Emkay Publ., Delhi, India.

Sarbhoy, A.K., Agarwal, D.K. and Varshney, J.L. (1986). *Fungi of India* (1977-81), Associated Publishing Company, New Delhi,

Tandon, R.N. and Chandra, S. (1976). *Supplement to the List of Indian Fungi* 1957-1962, Bishan Singh Mehendra Pal Singh and Periodical Experts, India.

Western, J.H. (1971). *Diseases of crop plants*, MacMilans, London and Basingstoke.

(Accepted for publication 10 September 1996)