

## Soft rot of cucumber (*Cucumis sativus* L.) by *Cunninghamella echinulata* Thaxt.

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Soft rot of cucumber fruits is a post harvest disease. This disease was observed in the fruits collected from the markets of Kottayam, Ernakulam and Thiruvananthapuram during the monsoon months June/July, 2001 and 2002. This disease is caused by *Cunninghamella echinulata* Thaxt. This is the first report of soft rot of cucumber caused by *C. echinulata* from India.

**Key words :** Fungus, market disease, pathogen, post harvest

### INTRODUCTION

Cucumber (*Cucumis sativus* L.) is a cucurbitaceous fruit mainly used as vegetables, and is rich in carbohydrates and vitamins. The fruits are eaten raw as well as cooked and used as salad. It is considered as a native of India. Different varieties of cucumber are available in the markets of Kerala throughout the year. These fruits are also brought to Kerala markets from Tamil Nadu and Karnataka.

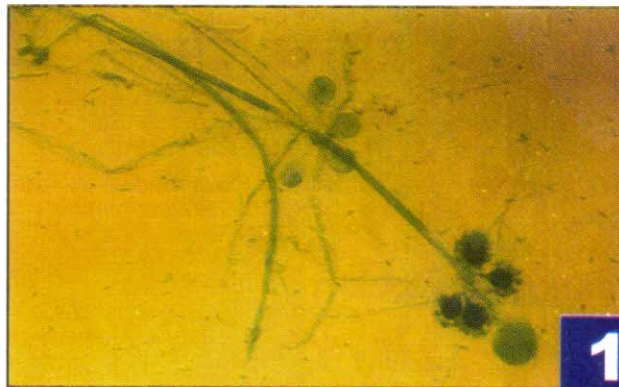
### MATERIALS AND METHODS

The fruit samples under study were collected from the major markets of Kottayam, Ernakulam and Thiruvananthapuram districts in Kerala during monsoon season. The infected fruits were brought to the laboratory in clean polyethylene bags and kept in aseptic conditions for further investigation. Photomicrographs of the pathogen were taken by Nokia Photomicrographic unit in Kodak gold 35 mm 100 ASA colour film. The pathogen was identified according to Hesse and Ellis (1973). The organism was cultured in PDA and confirmed pathogenicity of the fungus by inoculation studies by Koch's postulates.

### RESULTS AND DISCUSSION

The diseased fruits developed water soaked brown

spots on the injured skin of the fruit. Later the fruit surface became covered by white cottony mycelium. The rotted fruits developed a foul odour. The fungus produced numerous monosporous sporangiola on a branched sporangiophore. Sporangiola were echinulate and produced on lateral vesicles. A smooth terminal sporangium was also developed (Fig. 3)



**Fig. 1 :** Photomicrograph of *Cunninghamella echinulata* Thaxt. with sporangium and conidia. X 50.

The pathogen was isolated and identified as *Cunninghamella echinulata* Thaxt. This disease was found to be prevalent during monsoon season when the humidity was very high. This disease caused severe damage to cucumbers in Kerala markets. The soft rot of cucumber caused by *C. echinulata* Thaxt. is a new report from India. (Bilgrami *et al.*,

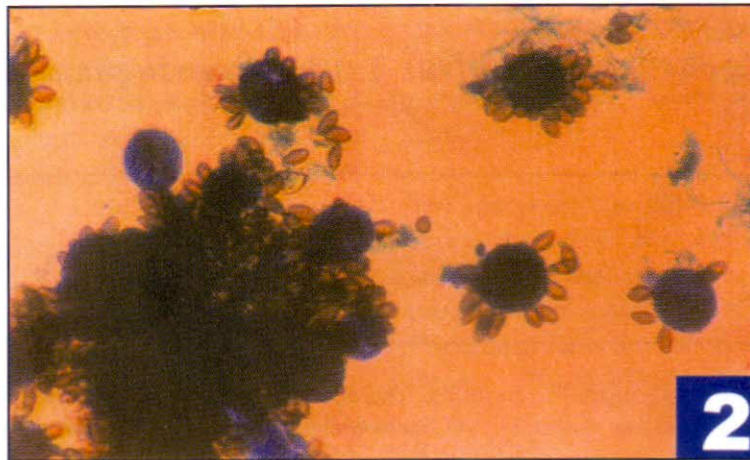


Fig. 2 : Photomicrograph of *C. echinulata* Thaxt. with sporangium and conidia. X 200.

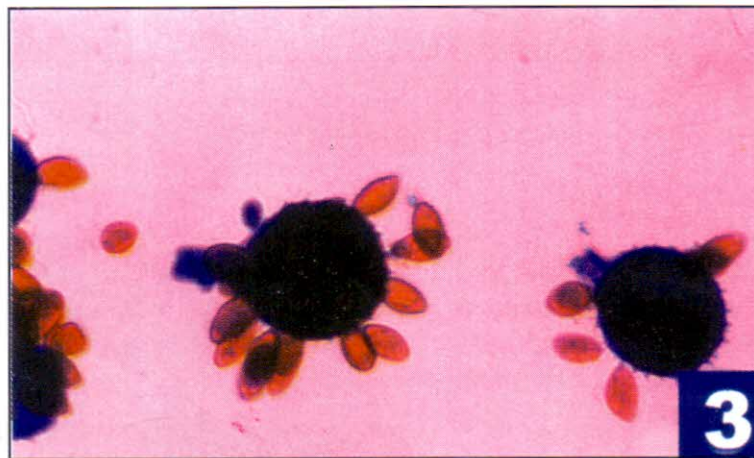


Fig. 3 : Photomicrograph of *C. echinulata* Thaxt. with sporangium and conidia. X 500.

1979, 1981 and 1991 ; Mukherji and Juneja, 1962 ; Mukherji and Bhasin 1986 ; Hosagoudar *et al*, 1996)

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