separating the disease causing organism from many saprophytic fungi e.g. *Alternaria* and *Curvularia* species, which frequently invade the necrotic lesion centres behind the advancing front of parasitic mycelium. *Pyricularia* is a weak saprophyte and hence the success by conventional "host tissue transplant" isolation method[1] is very low.

The spore discharge of pathogenic and nonpathogenic fungi associated with the blast lesion occurs under contrasting environmental conditions[2]. An attempt was made to develop a selective isolation method for obtaining the pure *Pyricularia* cultures by creating the congenial environment for spore release of blast pathogen and thus avoiding the spore liberation of nonpathogenic fungi.

The blast infected leaves of *Oryza sativa* L were collected at 4.00 p.m. and were cut into single-blast-lesion containing pieces. The hot OMA (oat meal agar medium, i.e. oat meal 30 g, water one lit., agar 12 g) was poured into petridishes. Each lesion sample, after surface sterilization with sodium hypochlorite was placed on the lid of petridishes. The lids were placed in position and the petridishes were incubated at 24 ± 2°C for 15 hr. The lesion samples were then removed. After three days the growing *Pyricularia* cultures were transferred to OMA slants.

The *Pyricularia* cultures were obtained from all the lesion samples. The culture growth was initiated by the liberated spores. The spores of *Curvularia*, *Alternaria* could be liberated when the conidiophore undergoes twisting movements[2]. The samples were fixed to the lids of petridishes by water drops and were incubated under high vapour pressure. Water is recognized as a releasing agent for blast conidia and it induces spore liberation by touching the juncture between conidia and conidiophore[3]. The direct contact of diseased host organ with media was avoided and the environment was favourable for the liberation of blast conidia; hence this selective isolation method was very useful for isolating the *Pyricularia* from all types (colours and sizes) of blast lesions.

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TUBER ROT—A NEW DISEASE OF *DIOSCOREA COMPOSITA* AND ITS CONTROL

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DIOSCOREA COMPOSITA (Hemst.) is a potential source of diosgenin. A disease causing tuber-rot in this crop was observed in the experimental plots at Chatha Farm as well as in the nursery plots maintained at the Regional Research Laboratory, Jammu during 1982–83. The representative samples were collected from the plants showing typical symptoms of the disease. The characteristics of the disease and identity of the causal organism was studied along with the control measures.

The typical symptoms of the disease under natural conditions were observed at the infected portion of the tubers showing brownish discoloration. Mild rotten flavour was observed in the rotten portion. White cottony mycelial growth was also observed on the upper surface of the infected tubers. During the advanced stages of the disease, longitudinal section of the infected tubers revealed very clear and distinct colour differentiation between infected and non-infected portions. Infections during storage spreads very fast at high temperature when compared to tubers stored at a low temperature.

The causal organism was isolated on P.D.A. plates and purified by single hyphal tip method.

The pathogenicity test was confirmed under laboratory conditions by inoculating healthy tubers with mycelial suspension of the same organism isolated from the diseased tubers. The characteristic symptoms of the disease developed within 10–12 days following inoculation. The infection was fast when the pathogen was inoculated with artificial injury on the tuber surface whereas the tubers without any injury took comparatively longer time to establish the infection.

To study the optimum temperature for the disease development, the inoculated tubers were kept at different range of temperatures (5–10°C and 25–28°C). The inoculated tubers kept at 5–10°C took more than 25 days to show the symptoms of the disease whereas the tubers kept at 25–28°C got diseased within 10–12 days.

Causal organism was identified as *Pythium spinosum* (CMI-276812).

However, from the literature it was revealed that the

rot of Chinese yam (*Dioscorea batata*) was caused by *Pythium ultimum*[1]. The soft rot of the Chinese yam was reported to be associated with *Pythium* or *Phytophthora*[2] from Jamaica. Recently Harada[3] reported that *Pythium* was the cause of the rot of Chinese yam in Japan. So far there is no record of *Pythium spinosum* causing tuber rot in *Dioscorea composita*. However, Thakur *et al*[4] reported the rhizome rot of *Costus speciosus* (Smith) caused by *Pythium spinosum* from India. Thus, it is the first report of *Pythium spinosum* causing tuber rot of *Dioscorea composita*.

As a part of the control measure against this disease, ten fungicides namely Thiram, Captan, Brassicol, Blitox, Ceresan, Dithane Z-78, Benlate, Deconil, Dexon and Dithane M-45 were tried with their three different concentrations viz 0.1, 0.2 and 0.3 %. Among these Dexan, Ceresan, Blitox, Thiram and Benlate were more effective.

The efficacy of each fungitoxicant was determined by measuring the radial growth of the test fungus in comparison to the growth in the control. The inhibition percentage was calculated by the formula of Vincent[5]: $I = 100\,(C - T)/C$ where I is inhibition, C is the growth of the fungus in control (without fungicide) T-growth in treatment.

Results showed that Blitox, Ceresan and Dexon were highly effective against the pathogen even at 0.1 % concentration whereas Benlate and Thiram inhibited the radial growth of the pathogen only 80 % at this concentration. Captan showed its effectiveness only at its 0.2 % concentration. The rest of the fungitoxicants were not effective against this pathogen. With still lower dilution (0.05 %) Ceresan and Blitox indicated 80 % inhibition and Dexon 100 % at 0.025.

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A NEW SPECIES OF MYCOVELLOSIELLA RANGEL FROM INDIA

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DURING frequent surveys of forests of Terai, U.P., the authors collected a foliicolous hyphomycetous fungus which has been described as a new species of *Mycovellosiella* as under:

Mycovellosiella myrtacearum A. N. Rai, B. Rai and Kamal sp. nov.

Maculae amphigenae; coloniae hypophyllae, satis magnae, irregulares, olivaceo-brunneae; hyphae superficiales vel ex parte immersae; hyphae repentes angustae 1.7–2.3 μm diam., brunneolae vel subhyalinae, septatae, glabrae; estromaticae; conidiophora solitaria semimacronemata vel macronemata, brunneola, cylindrica, erecta, plus minus flexuosae, eseptata vel septata, plerumque ramosa, plus minus geniculata, cicatricibus minus distincte praedita, 13.8–39 × 4–4.6 μm; cellulae conidiiferae integratae, terminales, polyblasticae, sympodiales, pallide olivaceo-brunnea, cicatricibus, plus minus distinctis praedita; conidia solitaria vel rare catenata, sicca, acropleurogena, obclavata, subacuta vel rare obtusa, ad bases obconico-truncata, pallide olivaceo-brunnea, glabra, transverse 3-7-septata, hilo plus minus distincto praedita, 27.6–92 × 1.7–2.8 μm.

In foliis vivis *Psidii guava* Linn. (Myrtacearum); Mar., 1979; Tilkonia (South Gorakhpur Forest Division); leg. B. Rai, KR 173, Typus, IMI 235984.

Infection spots amphigenous; colonies hypophyllous, fairly large, irregular, olivaceous brown; mycelium of hyphae superficial to partly immersed, repent hyphae narrow, 1.7–2.3 μm diam., light brown to subhyaline, septate, smooth; stromata absent; conidiophores solitary, semimacronematous to macronematous, cylindrical, erect, more or less flexuous, aseptate to septate, mostly branched, more or less geniculate with less distinct scars, pale brown, 13.8–39 × 4–4.6 μm; conidiogenous cells integrated, terminal, polyblastic, sympodial, cicatrized, pale olivaceous brown, conidial scars less distinct; conidia solitary to rarely catenate, ramo conidia rare, dry acropleurogenous, pale olivaceous brown, obclavate,