

The infected leaf sheaths were isolated on PDA and the fungus isolated in pure culture. Pathogenicity was tested by spraying heavy spore suspension and the mycelial fragments on wounded and unwounded surface of leaf sheaths of 8-week-old potted rice plants (Gopalbhog).

Perithecia of the fungus were subglobose, ostiolate, brown, base slightly pointed and measured  $30.6-102 \times 20.4-68 \mu$ , terminal hairs were stiff, septate, unbranched. Asci were cylindrical, 8-spored, ascospores single-celled, lemon-shaped, brown and measured  $3.4-6.8 \times 3.4-6.8 \mu$ . The fungus was identified as *Chaetomium brasiliense* Batista and Pontval. The genus *Chaetomium* is considered to be a saprophytic one. But recently some species of the fungus have been reported as pathogenic causing leaf spots on different plants<sup>1,3,4</sup>. Available literature suggests that this is the first report of pathogenic behaviour of *C. brasiliense* causing sheath blotch of rice from India and elsewhere. The specimen has been deposited at the Commonwealth Mycological Institute, Kew, Surrey, England (IMI No. 304884).

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## INFLUENCE OF LIGHT ON GROWTH PATTERN OF *RHIZOCTONIA SOLANI*—A MAIZE ISOLATE

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*RHIZOCTONIA SOLANI* a common pathogen, affects crop plants such as rice, *Sorghum* and maize<sup>1</sup>. Severe infection in maize by *R. solani* reduces the crop yield<sup>2</sup>. In addition, *R. solani* produces characteristic banding leaf symptoms<sup>3</sup> in maize resulting in the depletion of photosynthetic activity. Maize isolates of *R. solani* produce larger sclerotia which are quite distinct from the sclerotia of other isolates.

In the present study the sclerotia of *R. solani* were collected from the infected maize ear and were surface-sterilized using 0.1% NaOCl solution for 5 min and washed with sterile distilled water. They were then dried in sterilized blotters to avoid bacterial contamination and stored at 5°C for further use. Similarly, the mycelium of *R. solani* from infected maize seeds was isolated on PDA.

To test the growth potency, both mycelia and sclerotia were grown separately on PDA under different conditions of light. Since light is an important factor, the test fungus was cultured under near ultraviolet (NUV) light (360 nm), visible light (400–700 nm) and complete darkness.

Five mm circular discs of mycelium of the fungus were cut from 8-day-old cultures and seeded on PDA plates. One sclerotium was inoculated at the centre of PDA plate separately and incubated under NUV, visible light and darkness at  $22 \pm 2^\circ\text{C}$  for 8

Table 1 Variable growth potential of *R. solani*\* under different conditions of light

Incubation period (days)	Growth of <i>R. solani</i> under different conditions (cm)					
	Near ultraviolet light		Visible light		Darkness	
	Sclerotia	Mycelia	Sclerotia	Mycelia	Sclerotia	Mycelia
2	1.0–0.02	0.7–0.08	1.4–0.08	0.9–0.10	2.0–0.01	2.4–0.12
4	6.5–0.02	3.6–0.08	8.9–0.13	3.4–0.13	2.9–0.04	3.5–0.18
6	9.0–0.12	4.5–0.02	9.0–0.12	4.6–0.02	4.3–0.02	4.2–0.11
8	9.0–0.05	6.3–0.02	9.0–0.01	6.4–0.14	9.0–0.08	7.0–0.02
Sclerotial density	180/plate	Nil	360/plate	Nil	200/plate	Nil

\* Mean  $\pm$  standard error of the mean.

days. The colony growth of the fungus in all the plates was recorded at 2-day intervals; the production of sclerotia was also recorded (table 1).

The results showed variation in the growth potential of mycelia and sclerotia. Under the conditions specified above, sclerotia showed rapid growth by producing mycelia and large number of sclerotia also appeared subsequently. The growth activity of sclerotia under visible light was greater with higher sclerotial production as compared to the cultures under NUV and darkness. In darkness, growth from sclerotia as well as mycelium was more or less equal. In light, however, growth from sclerotia was markedly higher than from mycelia. The growth of the fungus arising from the mycelial disc was almost uniform under all the conditions, with no sclerotial production. The higher growth activity of sclerotia is attributed not only to the *in vivo* factors but also to the stored substances present in them.

It is therefore concluded that *R. solani* is an efficient pathogen which can adapt and survive under varied field conditions through the production of sclerotia, whose density is regulated by the process of anastomosis between different mating types.

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## TAKHTAJANIANTHUS DE, GEN. NOV.

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IN 1875 E. Boissier and E. Blanche described a new genus of Compositae (Asteraceae) with the name *Postia* Boiss. and Blanche (in Hooker and Jackson<sup>1</sup>). But an year earlier, Fries<sup>2</sup> erected the genus *Postia* Fr. for a number of poroid fungi with soft basidiocarps, small pores and thin dissepiments. It was opined that taxonomically it is illogical and erroneous to accept the same generic name for Fungus and Angiosperm. Since it was published one year earlier, the Friesian name *Postia* Fr., has priority and therefore this generic name should be

regarded as valid. Naturally, the generic name *Postia* Boiss. and Blanche proposed for 4 species of Compositae (in Hooker and Jackson<sup>1</sup>) becomes invalid and a new generic name has been given for *Postia* Boiss. and Blanche which is as follows:

*Takhtajianthus* De, gen. nov. (the generic epithet celebrated after taxonomist Prof. Armen L. Takhtajan).

Capitula heterogama radiata v. disciformia floribus radii ♀ 1 — seriatis discique ♀ fertilibus, v. radio deficiente, homogama. Involucrum hemisphaericum v. subglobosum, bracteis imbricatis sub-2-seriatis appressis obtusis v acutis. Receptaculum paleaceum. Corollae ♀ ligulatae v. filiformes. Antherae breviter caudatae. Achaenia tetragonosun-compressa, hirta, conformia, omnia papposa. Pappus duplex, exterior pilis brevissimis persistentibus, interior paleis 2-3 caducis elongatis apice barbellatis constants. Harbae lanatae, e rhizomate crasso multicaules, ramis 1 cephalis v. corymboso-2-3-cephalis. Folio alterna, intogerrima v. denticulata.

Typus: *Postia lanuginosa* Boiss., 1875.

The 4 species included under the genus *Takhtajianthus* De, gen. nov. are as follows:

*Takhtajianthus bombycina* (Boiss. and Haussk.) De, comb. nov. (Basionym: *Postia bombycina* Boiss. and Haussk., In: *Boiss. Fl. Orient.*, iii, 183, 1875).

*Takhtajianthus lanuginosa* (Boiss.) De, comb. nov. (Basionym: *Postia lanuginosa* Boiss., In: *Boiss. Fl. Orient.*, iii, 182, 1875).

*Takhtajianthus microcephala* (Boiss.) De, comb. nov. (Basionym: *Postia microcephala* Boiss., In: *Boiss. Fl. Orient.*, iii, 183, 1875).

*Takhtajianthus puberula* (Boiss. and Haussk.) De, comb. nov. (Basionym: *Postia puberula* Boiss. and Haussk., In: *Boiss. Fl. Orient.*, iii, 183, 1875).

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