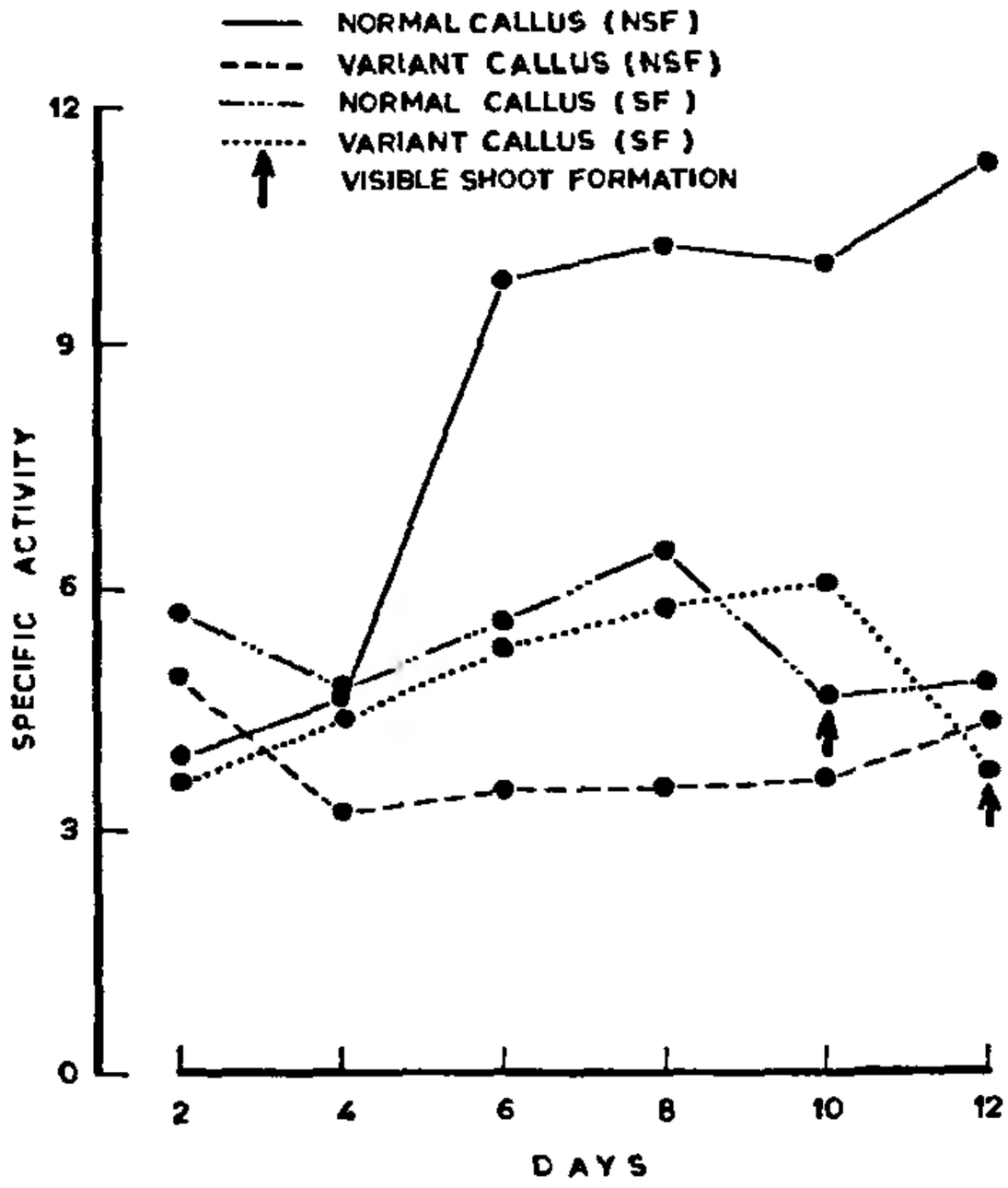

Figure 1. Acid phosphatase activity in NSF and SF calli of normal and variant callus cultures of *Nicotiana tabacum* L.cv. White Burley.

appearance. In normal callus where shoots appeared on the 10th day, the activity was at its peak on the 8th day. Similarly in variant callus, peak activity appeared on the 10th day while shoots were visible on the 12th day.

Comparison of the pattern presented in figure 1 suggests that the normal callus cultures under NSF conditions had higher activity than under SF conditions. On the contrary, variant callus exhibited greater activity under SF conditions than under NSF conditions. But the pattern of activity in the shoot-forming normal and variant callus remains the same which agrees with an earlier report[8]. According to these, shoot regeneration was obtained in different media in the same variety in 25 days. The peak acid phosphatase activity appeared on the 13th day before the visible organogenesis. Using different media under which the time schedule for shoot formation was altered, a similar pattern is observed in our study (i.e. peak of acid phosphatase activity preceeded the visible organogenesis). This indicates that under different sets of conditions, shoot formation follows a similar pattern and the biochemical events leading to it are also similar.

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CHAETOMIUM SHEATH BLOTCH: A NEW DISEASE OF RICE

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CHAETOMIUM sheath blotch, a new rice disease was identified on low land rice variety 'Gopalbhog' during September 1985 from the Balugan area of Orissa. The disease initiated on the leaf sheath as large oval to elliptical blotches which were brown to dark brown in colour (figure 1). The margins of individual blotches were deep brown to amber in colour with greyish white centre. The blotch measured 23–30 mm in length and 6–8 mm in breadth. In an affected sheath 1–3 blotches were observed. Sometimes one or more such spots coalesced to form large irregular necrotic blotches. The corresponding leaf blades of affected sheaths became pale, chlorotic and often withered. Symptoms were quite similar[2] to that of sheath blotch incited by *Pyrenochaeta oryzae*.

Figure 1. Symptom showing *Chaetomium* sheath blotch on rice leaf sheath (Gopalbhog).

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[1,3,4]. 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[1]. Severe infection in maize by *R. solani* reduces the crop yield[2]. In addition, *R. solani* produces characteristic banding leaf symptoms[3] 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 ± 2°C for 8

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

Incubation period (days)	Growth of *R. solani* 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 ± standard error of the mean.