TABLE I

Effect of method of inoculation on sporulation of some fungi in light and darkness, on agar surface and on cellophane laid over the medium

Fungus	Treatment	Method of inoculation: at centre	Method of inoculation: all over surface
Phoma (Ph 1)	Dark (agar)	−	+
	Dark (cellophane)	+	+
	Light (agar)	+	+
	Light (cellophane)	+	+
Phoma (Ph 2)	Dark (agar)	−	−
	Dark (cellophare)	−	−
	Light (agar)	−	+
	Light (cellophane)	+	+
Ascochyta pisi (AP 1)	Dark (agar)	−	+
	Dark (cellophane)	+	+
	Light (agar)	+	+
	Light (cellophane)	+	+
A. pisi (AP 2)	Dark (agar)	−	−
	Dark (cellophane)	−	+*
	Light (agar)	−	−
	Light (cellophane)	−	+*
Leptosphaerulina arachidicola (LA)	Dark (agar)	+*	+*
	Dark (cellophare)	+*	+*
	Light (agar)	+*	+
	Light (cellophare)	+	+

+ Fertile fruit bodies; +* Sterile fruit bodies: − No fruit bodies.

perithecia were formed by LA in light even without cellophane. In all cases fruit bodies were formed within 24-48 hours with this method of inoculation.

In *Melanconium fuligeneum* Lilly and coworkers[3,4] observed rapid and abundant production of spores when plates were flooded with a suspension of spores or cut mycelium. Leach[5] also reported sporulation by *A. pisi* in darkness when a spore suspension was spread over the medium. More recently[6], similar results have been reported in another pycnidial fungus *Septoria*. Lilly and his associates[3,4] were of the view that the rapid production of spores following flooding of plates with a spore suspension could be the result of a rapid depletion of nutrients by the multiplicity of growing points. We feel that this explanation may not be adequate to interpret our results. When spore suspensions of Ph 1 were used to flood plates with, we found that there was complete failure of sporulation, the growth remaining vegetative, when the concentration of spores was above a certain level. If depletion of nutrients is what triggers sporulation one would expect sporulation to start earlier with a higher concentration of spores which would deplete nutrients sooner. When we analysed the medium under the sporulating fungus in a flood-inoculated plate we found that hardly 1/8th of the sugar had been used up. Again, sporulation was as quick on a medium of double the normal strength as on a normal medium when inoculated by flooding. It is relevant to mention here that Leonian[7] who studied some 20 pycnidial fungi observed that generally a higher food concentration produced more numerous pycnidia, that rich hyphal growth and pycnidial development were parallel within a wide range and that a sudden increase of food concentration upon a mycelium grown in a more dilute solution was the cordition most favourable to pycnidium formation. Our results and Leonian's seem to suggest that mere depletion of nutrients is not what triggers sporulation in pycnidial fungi. In such fungi, when light also has a role, at least under some conditions, the situation is a little more complex. We are now studying this problem.

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University Botany Lab., Madras 600 005, *January* 22, 1976.

T. S. SURYANARAYANAN.
R. N. SWAMY.

1. Swamy, R. N. and Govindaraghavan, B., *Curr. Sci.*, 1972, **41**, 750.
2. Bhama, K. S., *Ibid.*, 1971, **40** 45.
3. Timnick, M. B., Barnett, H. L. and Lilly, V. G., *Mycologia*, 1952, **44**, 141.
4. Lilly, V.G., In *The Physiology of Fungi and Fungus Diseases*, W. Va Univ. Agri. Exptl. Stn., 1963.
5. Leach, C. M., *Mycologia*, 1965, **57**, 291.
6. Lee, Nai-Pin and Gareth-Jones, D., *Trans. Brit. mycol. Soc.*, 1974, **62**, 208.
7. Leonian, L.H., *Am. J. Bot.*, 1924, **9**, 19.

CORYNOSPORA BLIGHT OF *SOLANUM MAMMOSUM* L.: A NEW RECORD FROM INDIA

Solanum mammosum L. has recently been introduced at Jorhat, Assam, for its gluco-alkaloid solasodine. The leaves of the plants in experimental plantation at Regional Research Laboratory, Jorhat (Assam), were found to be severely attacked by the organism during January-February. The lesions were also found on the stem. Infection generally started from the margin of the leaves, more at the apical portion and usually enlarged and coalesced forming bigger patches. Infection at the lower portion of the leaf is faint dark tan with concentric rings surrounded by yellow margin. Affected leaves show yellowing and early shedding.

On the basis of morphological characteristics, the pathogen was identified as *Corynospora cassiicola* (Bork and Curt.) Wei[1-2]. Pathogenicity test of the fungus was successfully confirmed by spraying thick conidial suspension on the healthy plants. The literature available[3-7] elicited that the fungus *C. cassiicola* has not been reported earlier on *S. mammosum* L. and hence this constitutes a new host record of this

fungus from India. The specimen has been deposited at CMI, Kew, Surrey, England (IMI 189448).

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Medicinal and Economic Plants Division,
Regional Research Laboratory,
Jorhat 785 006 (Assam), *June* 30, 1976.

D. N. UPADHYAY
D. N. BORDOLOI

1. Ainsworth, G. C. and Bisby, G. R., *Dictionary of the Fungi*, CMI, Kew, Surrey, 1971, p. 136.
2. Barnott, H. L. and Hunter, B. B., *Illustrated Genera of Imperfect Fungi*, Burgess Pub. Co., Minnesota, U.S.A., 1972, p. 116.
3. Butler, E. J. and Bisby, G. R., *The Fungi of India* (1952), Revised by R. S. Vasudeva, ICAR, New Delhi, 1960, p. 263.
4. Dubey, G. S., *Curr. Sci.*, 1975, 44 (22), 823.
5. Mukerji, K. G. and Juneja, R. C., *Fungi of India*, Emkay Pub., Delhi, 1975.
6. Saksena, H. K. and Singh, D. V., *Indian Journal of Farm Sciences*, 1975, 3, 95.
7. Singh, N. I., Panch Bhaiya, Y. P. and Baruah, H. K., *Curr. Sci.*, 1976, 45 (10), 394.

SCLEROTIAL ROT OF *SOLANUM KHASIANUM* CLARKE AND *SOLANUM MAMMOSUM* L.: TWO NEW HOSTS

THE plants, *Solanum khasianum* Clarke and *Solanum mammosum* L., are important sources of raw material for steroid hormone industry.[1] The latter has been introduced recently at Jorhat, Assam. The plants under experimental cultivation were found to be severely attacked by the organism in May, June and July when high temperature prevailed after rains. The infection which started from the collar region of the plants covered the whole of the main stem with white mycelial growth bearing sclerotial aggregations in advance stage, resulting shedding of leaves, rotting and ultimately death of the plants. The mustard seed-like Sclerotia which were mostly produced at the base of the stem were also present over the ground around the plants.

On the basis of morphological features and cultural characteristics, the organism was identified as *Sclerotium rolfsii* Sacc. (*Corticium rolfsii* Curzi). The pathogenicity of the fungus was confirmed by inoculating the plants under natural conditions which produced similar symptoms. *S. rolfsii* has been found to cause collar and root rot resulting wilting, yellowing or leaf shedding of many economically important plants[1-4] in the country. There is no previous record of the fungus on these hosts. The specimens have been deposited in CMI, Kew, Surrey, England (IMI-187261 and 187262).

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Medicinal and Economic Plants Division,
Regional Research Laboratory,
Jorhat 785 006 (Assam), *July* 8, 1976.

D. N. UPADHYAY
D. N. BORDOLOI

1. Butler, E. J. and Bisby, G. R., *The Fungi of India* (1952), Revised by R. S. Vasudeva, ICAR, New Delhi, 1960, pp. 151 and 277.
2. Kamal and Singh, S., *Curr. Sci.*, 1976, 45 (6), 235.
3. Mukerji, K. C. and Juneja, R. C., *Fungi of India, Supplement to the List of Indian Fungi* (1962-72), Emkay Publication, Delhi, 1975, p. 224.
4. Tandon, B. N. and Chandra, S., *Supplement to the List of Indian Fungi* (1957-62). Univ. Allahabad, 1963, p. 246.

MONOPLOID IN *GOSSYPIUM ARBOREUM*, L. VAR. LD. 132

KIMBER AND RILEY (1963)[2] have reviewed literature on the haploids with ($n = 2x = 26$) in tetraploid *G. hirsutum* and *G. barbadense* cottons. Turecotte and Feaster (1969)[4] and Barrow and Chaudhari (1976)[1] reported haploids in interspecific hybrids of *G. hirsutum* and *G. barbadense*. However, occurrence of monoploid ($n = x = 13$) has been reported in diploid species of *Gossypium* rarely. Thus Skovsted (1935)[3] and Webber (1940)[5] reported monoploids in diploid *Gossypium* species *G. davidsonii* Kell. and *G. sturtii* Muell ($2n = 26$).

FIGS. 1-3. Fig. 1. Monoploid *G. arboreum* var. LD. 132 ($n = x = 13$). Fig. 2. $n = x = 13$ Univalent Chromosomes at metaphase I (× 500) Fig. 3. $n = x = 6\,II + 1\,I$ at metaphase I (× 700).

Monoploids in the commonly grown cotton *G. arboreum* have not been reported so far. The authors recorded a single plant in 1976 in the field population of *G. arboreum* var. LD. 132. The plant was conspicuous because of its miniature leaves and dwarf habit with short internodes (Fig. 1). It flowered very late