

NEW HOSTS OF *CORYNESPORA CASSIICOLA* (BERK. AND CURT.) WEI

Corynespora cassiicola (Berk. and Curt.) Wei¹⁴ on brinjal and tomato has been occurring in Tirupati since 1965 during September-February period. During our studies on *Corynespora* leaf spot of brinjal, we noticed it on chilli, *Solanum nigrum* L., *Ocimum sanctum* L., *Leucas aspera* Spr., *Croton sparsiflorus* Mor,¹² *Gossypium hirsutum* L.,³ *Digera arvensis* Forsk. and *Syzygium jambolanum* D.C. A comparative study of the disease in the above hosts is reported here.

Leaf spots on tomato and chilli are dark brown, 3-4 mm. in diameter and target type with a chlorotic halo. Stem infection as dark irregular streaks is of common occurrence. Brinjal, *Ocimum*, *Leucas* and cotton show similar spotting but target type appearance is uncommon. In brinjal the lesions may coalesce to form irregular spots of 1 cm. size. Stem infection is not seen in these hosts. However dead stems of brinjal show velvety growth of the abundant conidiophores and conidia due to subsequent saprophytic colonization. Mature lesions on the above five hosts show abundant sporulation. *S. nigrum* L., *D. arvensis* and *S. jambolanum* develop minute, dark, non-sporulating spots. In the case of *S. jambolanum*, only seedlings at 6-8 leaf stage showed this type of infection and it was not noticed on trees.

Conidiophores are cylindrical, brownish, septate, with a bulbous basal cell. Conidia are obclavate to narrow cylindrical, in chains of 2 or 3, hyaline when young, later dark brown and thick-walled. They are porogenous and distoseptate, with a conspicuous hilum. Some abnormal bifurcate conidia have been noticed in the sporulating mass on dead stems of brinjal.

Isolates from all the hosts grow and sporulate well on potato-sucrose-agar (PSA). The range of the size of the conidia of the isolates in culture is 12.8-326.4 μ \times 6.4-9.6 μ and 2-22 septate. Measurements of conidia and conidiophores from different hosts are given in Table I. The similarity of the conidia in culture is seen as against that of the natural materials which show greater variation.

Pathogenicity tests proved lack of host specificity among the 4 solanaceous isolates. Isolates of *Ocimum* showed pathogenicity both on *Ocimum* and brinjal. Isolates from *Syzygium*, *Leucas* and cotton were found to be

TABLE I
Data on conidiophores and conidia of isolates of *Corynespora cassiicola* (in microns)

Host	Conidia				Conidiophores			
	Length	Width	Hilum*	Septa	Length	Width	Bu. cell†	Septa
Chilli								
Max.	275.2	22.4	9.6	23	275.2	9.6	16.0	10
Min.	35.2	6.4	3.2	2	95.6	4.8	9.6	3
Brinjal leaf								
Max.	432.0	22.8	9.6	36	630.0	9.6	19.2	13
Min.	44.8	4.8	4.8	3	96.0	6.4	6.4	3
Brinjal dead stem								
Max.	153.6	20.8	9.6	17	672.0	9.6	16.0	17
Min.	27.2	4.8	3.2	2	102.0	6.4	8.0	3
Tomato leaf								
Max.	140.8	22.4	8.0	36	384.0	6.4	12.8	8
Min.	32.8	3.2	4.8	3	54.0	4.8	6.4	2
<i>Ocimum sanctum</i> L.								
Max.	134.4	16.0	9.6	18	217.6	9.6	16.0	7
Min.	32.0	4.8	3.2	3	54.6	6.4	8.0	2
<i>Leucas aspera</i> Spr.								
Max.	138.0	22.8	9.6	16	280.0	9.6	12.4	10
Min.	30.6	4.8	3.2	3	52.0	6.4	6.4	3
<i>Gossypium hirsutum</i> L.								
Max.	147	19.5	7.5	14	459.0	9.0	13.5	12
Min.	24	9.0	4.5	3	74.0	7.5	7.5	3

* Hilum: Diameter of the hilum. † Bu, cell: Bulbous basal cell of conidiophore.

pathogenic to brinjal but did not infect their respective hosts under our test conditions.

Irrespective of the source of the isolates, earliest symptoms were noticed in 5-7 days on chilli, *S. nigrum* L., *O. sanctum* L., and in 2 to 3 days on brinjal and tomato, the disease being severe on the latter two.

Out of the several hosts tried brinjal isolates were also pathogenic to soybean, sesame, *Cajanus cajan* Millisp. and *Abelmoschus esculentus*, Moench.

In India *C. cassiicola* has been reported on brinjal,¹ tomato,⁵ papaw,⁷ *Piper betle* L.,⁸ castor,⁴ rubber,¹¹ eucalyptus,¹⁵ cassava,¹⁰ *Justicia gendarussa* L.,¹² *Adathoda* sp., *Barleria cristata* L., *Carissa* sp., *Pycnanthemum*,⁹ *Rauwolfia serpentina* Benth.⁶ and *Croton sparsiflorus* Mor.¹³ It has been reported on chilli² from Australia.

Thus chilli, *S. nigrum* L., *O. sanctum* L., *L. aspera* Spr., *D. arvensis* Forsk., *S. jambolanum* D.C. and *Gossypium hirsutum*, L. are new host records for India.

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