

Karyotype of *G. max* was not thoroughly analysed<sup>4,5</sup>. Detailed karyotype was analysed in *G. max* variety UPI following the technique described in ref. 1. In soyabean, however, a better karyotype was obtained following pretreatment in saturated paradichlorobenzene at 15°C for 1.5–2 hours and fixing in 3:1 for 48 hours at 37°C before hydrolysis and subsequent staining in leuco-basic fuchsin. Besides, the root-tips were incubated in pectinase for 1.5 hours at 30°C<sup>2</sup>.

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#### PHOTO-INDUCED CONIDIATION IN *ALTERNARIA MACROSPORA* ZIMM. AND *COLLETOTRICHUM GOMPHRENAE* RAO AND SALAM

BOTH quantum and quality of light influence sporogenesis in phytopathogenic fungi<sup>1–5</sup>. But the precise quality of light on sporogenesis has remained elusive till recently. Notable is the near ultraviolet (NUV) light which appears to be effective in inducing sporulation of a few fungi<sup>6–8</sup>.

In this note we report on the quality of light influencing sporulation of two fungi. *Alternaria macrospora* Zimm. isolated from *Gossypium hirsutum* and *Colletotrichum gomphrenae* Rao and Salam from *Gomphrena decumbens* sporulated profusely when exposed to 'Black light' fluorescent lamp (320–420 nm) and 'cool white' day light fluorescent lamp (300–700 nm) respectively. *Alternaria macrospora* produced maximum number of spores when exposed to near ultraviolet light, but cultures incubated in daylight fluorescent lamp produced less number of spores (Table I). Several species of *Alternaria* sporulate profusely under near ultraviolet light followed by a period of darkness<sup>9,10</sup>.

Of the various media tried, viz., potato dextrose agar, water agar, oatmeal agar, cotton leaf extract agar, Czapek's agar with and without yeast extract (0.1%) and Richards' agar, we found that photo-induced sporulation in *A. macrospora* was more pronounced

when grown on modified Richards' agar medium. Cultures incubated in total darkness did not sporulate in all media. Furthermore, lowering the sucrose concentration from 5.0–0.5% in Richards' agar induced the maximum number of spores.

TABLE I  
Effect of 'Black Light' and 'Cool white' daylight fluorescent lamps on sporulation of *A. macrospora* in culture\*

Treatment	Spore No./ml in thousands**
'Black light' lamp	6200
'Cool white' daylight lamp	20
Total darkness	nil

\* 12 h light/12 h dark cycle was given and grown on Richards' agar.

Spore counts taken on 10th day after inoculation.

\*\*Each result is an average from three replicates.

*Colletotrichum gomphrenae* grown on potato dextrose agar sporulated profusely when exposed to visible white light. But, near ultraviolet light from 'Black Light' was not as effective as light from visible white light. Leach<sup>6</sup> concluded that most fungi do not respond to near ultraviolet light in sporulation. Recent report on the effect of visible white light on enhanced spore production by *Trichometasphaeria turcica*<sup>11</sup> agrees with Leach's statement. The response elicited by *C. gomphrenae* also clearly confirms to Leach's<sup>6</sup> conclusion.

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