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A Short Note

INDUCING SPORULATION IN *ALTERNARIA SOLANI* ELL. ET MART. (JONES ET GROUT) IN PURE CULTURE

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Sporulation was induced in *Alternaria solani* by adopting, with certain alterations, the method devised by Douglas and Pavek (1971).

INTRODUCTION

Alternaria solani Ell. et Mart. (Jones et Grout) scarcely sporulates in a pure culture. Great variability is found in different isolates and certain isolates do not sporulate at all. Such an isolate from tomato, used for physiological studies in this laboratory, did not sporulate at all in culture. Various methods, therefore, were tested for inducing sporulation.

MATERIALS AND METHODS

To induce sporulation in *A. solani* ten different culture media with and without tomato juice were tried, viz. potato dextrose agar (PDA), Basal Medium, Richard's agar, Czapek's agar, Nutrient broth, Leonion agar, Conn's agar, Emerson's YbSs (Soluble starch agar), Krainsky's medium and Brown's agar.

In addition, the methods tried by Rands (1917), McCallen and Chan (1944), Parasad and Dutt (1974), and Douglas and Pavek (1971) were also followed and the one mentioned was adopted with some alterations. Petri plates containing PDA were inoculated in the centre from an actively growing fresh culture and incubated for 14 days at 25°C under constant fluorescent light. The culture was cut into 5 cm x 0.5 cm strips and placed in a sterile 250 ml flask containing 50 ml sterile distilled water. The flask was shaken vigorously for approximately one minute and then left to stand for ten minutes. Fresh plates of the PDA were inoculated with one ml of the liquid from the flask and rotated so that the surface was completely covered. The plates

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were incubated for six days at 20°C under a constant red coated ordinary light source of 15 W, 25 cm above the culture.

RESULTS AND DISCUSSION

The fungus failed to sporulate on all the media used in these studies. Similarly, sporulation could not be induced by the methods tried by Rands (1917), McCallan and Chan (1944), Parasad and Dutt (1974). The method of Douglas and Pavek (1971), however, proved successful. A fairly good amount of sporulation was obtained with this method. It was Lukens (1960, 1963) who first reported that light stimulated *A. solani* to form conidiophores but inhibited the conidiophores from bearing spores. Later, Lukens (1966) and Douglas and Pavek (1971) reported that conidiophores can bear spores in light when temperature is below 23°C. Our results appear to be in agreement with their investigations.

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