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A Culture Medium for Spore Production by *Botrytis cinerea* Isolated from Chickpea

V.K. Sheila and Y.L. Nene (ICRISAT)

Botrytis cinerea Pers. ex Fr., which causes gray mold disease of chickpea, grows profusely on potato-dextrose broth; however, few or no conidia are produced on this medium. Large amounts of inoculum (conidia) are needed to carry out successful artificial screening to identify disease-resistant chickpea lines. Attempts were therefore made to formulate a growth medium that would give a large number of conidia under optimum incubation conditions. Good sporulation was observed on the pigeonpea seed meal broth described by Sheila et al. (1983). We, therefore, experimented with extracts of desi chickpea seeds to develop a medium for use when *B. cinerea* conidia are required.

The following procedure using a Desi Chickpea Meal Broth (DCMB) medium has given a consistently high yield of spores and is now in routine use.

A. Preparation of inoculum of *B. cinerea*

1. Prepare standard Potato-Dextrose Agar (PDA) medium, and dispense into 9-cm diameter plastic petri dishes, 15 mL dish⁻¹.
2. Inoculate each petri dish with a small portion of *B. cinerea* mycelium from a pure culture and incubate for 5 days at 25°C.

B. Preparation of DCMB medium

1. Take about 200 g of clean seed of desi chickpea and grind it. Sieve the meal, and take that portion retained on a 20-mesh sieve.
2. Add 40 g of the sieved meal to 1 L of distilled water and boil for 10-15 min. Filter the broth through a strainer.
3. Dispense 50 mL portions of the broth into 250

mL flasks and autoclave at 15 psi for 20 min. Allow broth to cool to room temperature.

C. Inoculation of DCMB

1. Cut a 5-mm diameter disc from the mycelial colony of *B. cinerea* on the PDA medium and add this to a 250 mL flask containing the cooked DCMB.
2. Incubate the inoculated flask at 15°C under alternating 12 h darkness with 12 h of near-ultra-violet light for 15 days.
3. Harvest conidia by taking out the mycelial mat, macerating it in a blender, and diluting it with water to get required concentration of conidia mL⁻¹. The conidial concentration is determined by using a hemacytometer.

Reference

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A New Chickpea Disorder Observed in Pakistan

Muhammad Bashir, I.A. Khan, S.M. Iqbal, and M. Rahman (National Agricultural Research Center, Park Road, Islamabad, Pakistan)

On 4 Feb 1987, while observing the chickpea (desi) breeding materials planted in the Pathology Block of the National Agricultural Research Centre (NARC) in Islamabad for screening against blight disease by *Ascochyta rabiei*, a serious disorder was observed in some crosses. The symptoms of the disorder are described below.

Symptoms. The affected plants were showing stunted growth, short internodes, leaves with necrotic tips found slightly curling upwards. Instead of normal branching in such plants, branches bent to cuplike structures and were found thicker than the normal ones. A slight reddening of the leaves was also observed.

The main stem of most of the plants was bent and proliferation of the terminal parts was more common. Such plants showed some outgrowth in the nodes. The roots were found quite healthy and normal. In general, the disorder was more conspicuous on the upper parts of the affected plants.