

RESEARCH ARTICLE

# Effect of fungicides on seed mycoflora and seed germination of sonamukhi

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## ABSTRACT

*In vitro* experiment was conducted to study the effect of seed dressers *i.e.* Antracol and Thiram on seed mycoflora and germination. It was found that both the seed dressing chemical reduced the seed mycoflora and increased the germination percentage. Among these two fungicides, Thiram was found best to give maximum germination (79 %) and 0.0 per cent seeds mycoflora at 3.0 per cent concentration. Antracol showed 0.0 per cent seeds mycoflora and 80 per cent seeds germination at 3.5 per cent concentration.

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## INTRODUCTION

*Cassia angustifolia* Vahl is known as Indian senna or sonamukhi. It is very important medicinal plant which belongs to family Caselpinaceae (Rasheeduz Zafer, 1994). The leaves and pods produce crude drug senna (Bhattacharijee, 2000). sonamukhi contains glucoside, kamperol, anthroquinone, sennoside A and B, essential oil, calcium oxalate, flavanols etc.

Sonamukhi leaves are a sure and safe purgative for children and weak elderly persons. They are used as infusion and decoction. It is also used against skin diseases and pimples. It is also used as anthelminthic for intestinal worms and as liver stimulant.

Sonamukhi crop is grown in Rajasthan, Gujarat and Maharashtra especially. The seeds of sonamukhi are reported to be attacked by fungi. Hence, the present investigation has been undertaken to study the effect of seed dressers, on seeds mycoflora and seed germination of sonamukhi because seed mycoflora reduce germination percentage, so it causes heavy loss of yield. Blotter paper method was used for present investigation.

## MATERIALS AND METHODS

The experiment was conducted in Laboratory of Research Centre of Botany in D.S.M. College, Parbhani, to find out the efficaceous fungicides for seed treatment to control seed mycoflora and to increase seed germination of sonamukhi.

The healthy and infected seeds of *Cassia angustifolia* Vahl were collected from Marathwada Agricultural University, Parbhani (M.S.) and Central Institute of Medicinal and Aromatic plants (CIMAP), Lucknow (U.P.). For isolation of external and internal seed mycoflora *viz.*, associated with healthy and unhealthy seed samples of *Cassia angustifolia* Vahl. The seed samples were stored in cloth bag at room temperature in laboratory. Seed germination, per cent seed mycoflora, seedling vigour were calculated by using Blotter paper method (Fig. A, B and C)

For determination of effect of Antracol and Thiram *i.e.*, used to study seed mycoflora, germination and vigour index by using lethal doses was from 0.1 to 3.5 per cent. Seeds were surface sterilized by 0.1 % HgCl<sub>2</sub> solution and dried in sunlight. The seeds were divided into 10 fractions for treatment of different concentrations of fungicides and one set was kept