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A CASE STUDY

Anthracnose- A devastating pre and post-harvest disease in mango

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ABSTRACT

Anthracnose is presently recognized as the most important pre and post harvest fungal disease of mango world wide caused by *Colletotrichum gloeosporioides* Penz. The post-harvest phase is the most damaging and economically significant phase of the disease worldwide. This phase is directly linked to the field phase where initial infection usually starts on young twigs and leaves and spreads to the flowers, causing blossom blight and destroying the inflorescences and even preventing fruit set. It is major constraint on the expansion of export trade of mango causing substantial yield losses which can reach 60 per cent or higher during the heavy rainy season. Causing direct yield loss in the field and packing plant, and quality and affects the marketable fruit rendering it worthless. The successful management of anthracnose relies on understanding the conditions that promote disease development, and the economics, efficacy and market acceptability of the various control measures, mango cultivar that is grown, the production area, and the intended final market, an integration of two or more tactics may be needed. A review of the etiology and epidemiology of the disease is provided below as background for the various approaches that have been used to manage the disease.

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INTRODUCTION

The mango (*Mangifera indica* L.) is an important crop in India and other tropical and subtropical region of the world. It is grown in more than 100 countries but no where it is greatly valued as in India where 40 per cent of total fruits grown is mango.

In India, the mango is found adapted to diverse environments and management conditions which has introduced new dimension to problems and hence challengeges. Among them anthracnose is one of the devastating pre and post-harvest fungal disease which has wide occurrence and is the most important biological constraint to mango production in Southeast Asia resulting in substantial yield loss (Dodd *et al.,* 1991). Anthracnose caused by *Colletotrichum gloeosporioides* Penz., is the most destructive disease of mango causing substantial yield losses which can reach 60 per cent or higher during the heavy rainy season (Ann *et al.,* 1997). In humid and high rain fall area in India is serious concern in production and post harvest management of mango fruits because abundance of mango flowering has happened before and yet the yields or fruit quality were very disappointing by anthracnose disease, especially in wet areas of mango cultivation. Anthracnose is presently recognized as the most important field and post harvest disease of mango world wide (Ploetz and Prakash, 1997). It is major constraint on the expansion of export trade of mango (Jeger and Plumbley, 1988). Post harvest decay due to anthracnose was 29.6 per cent in Himachal Pradesh, India during 1990-92 (Sharma and Verma, 2007). The disease incidence from different countries has been reported to be 32 per cent in South Africa, 64.6 per cent in Costa Rica during 1990 (Arauz *et al*., 1994) and could reach into almost 100 per cent in fruits produced under wet or humid conditions (Arauz, 2000). A systematic study was conducted during the year 2000 to assess the extent of loss due to post harvest loss due to anthracnose disease in mango in Coimbatore, India at field, wholesale, retail and consumer levels. The magnitude of loss due to anthracnose diseases on