Indian Journal of Tropical Biodiversity

FIRST REPORT OF WEB BLIGHT DISEASE OF (*Bambusa bambos (L.) Voss)* FROM ASSAM AND ITS MANAGEMENT USING COMMERCIALLY AVAILABLE FUNGICIDE

RAJIB KUMAR BORAH[1], RITURAJ DEB[1]AND GURPREET KAUR BHAMRA[1]
[1]Rain Forest Research Institute, Jorhat-785001, Assam
Corresponding author email: rkborah@gmail.com Phone: +919435051669

ABSTRACT: Web blight disease of bamboo caused by *Rhizoctonia solani* is considered as one of the most serious emerging disease in Assam. Limited scientific research has been carried out by the different workers in India for scientific management of the disease by using chemicals, thus keeping in mind the importance of the crop, the present study was carried out to evaluate the efficacy of four different fungicides viz., Validamycin, Hexaconazole, Propiconazole and Mancozeb both *in vitro* and *in vivo* (under pot culture condition). The result revealed that, Propiconazole and Validamycin @ 1000 ppm showed highest inhibition of mycelial growth i.e., 95.97 and 94.44 percent respectively which was followed by Mancozeb (92.62%)and Hexaconazole (89.22%). The fungicidal treatments were applied as foliar spray @ 0.1% at an interval of 15 days while conducting the pot experiment during the month of October-November, 2018. Significantly, highest reduction of disease incidence was recorded with Validamycin (16.17%) which was followed by Propiconazole (16.22%), Mancozeb (20.50%) and Hexaconazole (23.33%).

Keywords: Bamboo, management, *Rhizoctonia solani,* web blight.

Citation: Borah RK, Deb R, Bhamra GK (2019). First report of web blight disease of Bamboo (*Bambusa bambos*) from Assam and its management using commercially available fungicide. Indian J Trop Biodiv 27(2): 38-49

INTRODUCTION

Bamboo, a non-wood forestry product is considered as one of the most important agricultural plants world-wide (Lin *et al*., 2005). It is a fast growing world's greatest natural and renewable resources gaining approximately 75 to 400 mm per day whose rate of biomass generation is greater than any other plant species in the plant kingdom. Bamboo is a domesticated term for the members belonging to subfamily Bambusoideae and family Poaceae, the grasses. It is an important forest trees with versatile uses in daily life, apart from having largest use in the paper and pulp industry (Varmah and Pant, 1981). In total about 18 million hectare of bamboo are distributed in world ecosystems in Asia, Africa and America (Mudoi *et al*., 2013). India has the largest bamboo forest in the world next to China, with richest bamboo genetic resource of 136 species belonging to 30 genera occupying an area of 10.03 million hectare which is roughly 12.8 percent of the total forest area in the country. Out of the total bamboo plantation area, nearly 31per cent occurs in the North-eastern states (FSI, 2019) which play a major role in the livelihood of rural people and in rural industry.

Bamboo is like the backbone of the economy and socio-cultural heritage of bamboo growing area of India, particularly in North-east India and has been an important part in the lives of the people of Assam. Some of the most important bamboo genera of this region are *Bambusa*, *Dendrocalamus*, *Dinochloa*, *Cephalostachym* and *Neohouzeana* etc. are found to be distributed in the region upto 600 m above mean sea level. On the other hand, species of the bamboo genera such as *Arundinaria*, *Semiarundinaria*, *Chimonobambusa*, *Thamnocalamus* and *Phyllostachys* etc. are found upto an elevation of 800-3500 m above mean sea level (Hazarika, *et al*., 2008). The current annual demand of bamboo is about 27 m MT whereas the supply is only 13.47m MT i.e. only half of the total demand (Dhruga, 2017). The productive potential of bamboo stands is greatly affected by various biotic and abiotic factors *viz*., erratic rainfall, fire, grazing, unscientific harvesting and pests and diseases.