

## **Banana stem rot disease; casual agent (*Marasmiellus* sp.), host range and selection of low cost media for its cultivation**

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### **Abstract**

A Basidiomycetes fungus *Marasmiellus* sp. (Agaricales: Tricholomataceae) caused pseudostem rot on banana (*Musa* sp.), is found in Jaffna, Sri Lanka. Since it is latest to this region, this study was carried out to understand its disease cycle, symptoms, host range, occurrence and intensity of disease and tend to be selecting the cost effective media for its growth. On potato dextrose agar (PDA) fungus produced cottony white colony, later turned to cream and branched mycelium under light microscope. White fruiting body; with Pileus  $3\pm 2$  cm in diameter, strip length  $3.5\pm 1.5$  cm but small in size under adverse climatic circumstances. Rotted patches on rhizome and pseudo stem, gradual wilting of leaves from lower area to upper part, diminutive growth, strange foliage and bunches, toppling of crown, fruiting body adhere on pseudo-stem are the major syndromes of disease. Incidence of stem rot was confined only to Valikamam division of Jaffna. Amongst foremost banana cultivars grown in Jaffna; Kathali, Itharai and Monthan exhibited stem rot excluding Kappal. Under in-vitro condition PDA, King yam (KY) and Elephant foot yam (EFY) media recorded superior (90 mm) mean colony diameter following that nutrient agar (NA) (69.15 mm), sago (S) (55.45 mm) and the lowest growth was recorded on the water agar (WA) and Filter paper (FP) media as 31.15 mm and 22.95 mm, respectively. KY and EFY were found as excellent substrate for *Marasmiellus* sp. and the fungus was grown well and substituted the PDA for growing pure culture as well as in-vitro experiments.