

World Congress on

PLANT PATHOLOGY & PLANT BIOTECHNOLOGY

International Conference on

ORGANIC FARMING, BIODYNAMICS

September 24-25, 2018 | Dallas, USA

Novel approaches for management of anthracnose of banana caused by *Colletotrichum musae*

Yashoda R Hegde

University of Agricultural Sciences, India

Banana is one of the most important fruit crops. The fruit is of high nutritional value. The most important causes of losses are postharvest market diseases of banana fruits like anthracnose. In this study, an attempt was made to develop the strategies for its management. Consortium of three bioagents (*Bacillus subtilis* + *Pseudomonas fluorescens* + *Trichoderma harzianum*) effectively arrested the mycelial growth of *C. musae* (89.26 %). Among the botanicals, neemgold at 2.0% effectively arrested the mycelial growth (80.38%). Out of five oils evaluated *in vitro*, complete inhibition of mycelial growth was recorded in clove oil at 0.5 % and eucalyptus oil at 2% concentration. Among the four salts evaluated *In vitro*, complete inhibition of mycelial growth was recorded with boric acid and sodium bicarbonate at both 5.0 and 10.0 % concentration. Most effective nanoparticles (NPs) against *C. musae* were Ajwain-Mg NPs (0.2%), Ajwain-Ni NPs (0.2 %) and Neem-Ag NPs (0.1 & 0.2 %) where complete inhibition of spore germination was noticed. Among the bioagents tested *in vivo*, highest per cent disease reduction (82.86%) was noticed in consortium of three bioagents; neemgold and discheck at 2.0 per cent (92.11%) among the botanicals; lemongrass oil at 2.0 and 1.0 % and neem oil at 2 % (91.89%) among oils; boric acid at 5 and 10 % and sodium bicarbonate at 10% (91.18 %) among salts. Minimum PDI (6.67%) was recorded at 0.05 % concentration of Neem-Ag NPs. Among all the biorationals evaluated, postharvest dipping of banana fruits with boric acid at 5.0 % (11.11PDI) and lemongrass oil at 1.0 % (14.44 PDI) were most effective in managing postharvest anthracnose of banana.

Biography

Dr. Yashoda R. Hegde is working as Professor in the department of Plant Pathology, University of Agricultural Sciences, Dharwad since 2007. She has a rich experience of 31 years in teaching and research in Plant Pathology. She is the recipient of several prestigious awards like C.V.Raman Young Scientist Award, Life time achievement Award given by Venus International Foundation, Fellow of Indian Phytopathological Society, Fellow of Plant Protection Association of India etc.

hegdeyr@uasd.in

Notes: