***In vitro* antifungal potential of selected plant extracts against *Colletotrichum musae*, causing anthracnose disease in banana**

YBKT Lakshani1\*, DMKW Gunasekara2, SS Paththinige 2 and MLMC Dissanayake1

*1Department of export Agriculture,*

*Faculty of Agricultural Sciences,*

*Sabaragmuwa University of Sri Lanka,*

*Belihul oya, Sri Lanka.*

*2Plant Virus Indexing Centre,*

*Gabadawatta, Homagama, Sri Lanka.*

*\***kavindhyaybtl@gmail.com*

The disease Anthracnose caused by Colletotrichum musae is one of the most common and
destructive to bananas, especially during storage. The management of anthracnose is
primarily accomplished by the application of synthetic fungicides. Thus, residual toxicity
of synthetic fungicides becomes the major concern as bananas are consumed within a short
time frame following harvest. Plant extract is becoming a more secure alternative to
conventional fungicides to control plant diseases. The present investigation was conducted
to screen the efficacy of several plant extracts against C. musae in in vitro condition. Plant
extracts of Solanum torvum (Thibbatu), Emblica officinalis (Nelli), Lantana camara(Gadhapana), Ocimum tenuiflorum (Maduruthala), Mimosa pigra (Yoda nidikumba),
Moringa oleifera( Moringa) were extracted by using methanol. Each plant extraction
(150mg/ml) was screened in vitro by using “poison food technique”. The methanolic
extraction of S. torvum showed the highest growth inhibition (77.59%) against the growth
of C. musae, followed by L. camara and O. tenuiflorum showed 52.22% and 48.28%
respectively. The extraction of S. torvum showed the highest effective in reducing fungal
growth in in vitro condition. Further research is needed to evaluate the effectiveness of
plant extracts against the casual organism of anthracnose of bananas in vivo condition prior
to make any recommendation.

**Key words**: *Colletotrichum musae, Fungicides, Plant extraction, Poison food technique*