

EVALUATION OF TWO LOCALLY AVAILABLE TUBER FLOURS AS ALTERNATIVE MEDIA FOR CULTURING FUNGI

S. Kothai*, S. Tharmila and A.C. Thavaranjit

Department of Botany, Faculty of Science, University of Jaffna, Sri Lanka

**kothai02@gmail.com*

Dioscorea alata (Purple yam) and *Manihot esculenta* (Cassava) have been cultivated successfully in northern region of Sri Lanka and its tuber flour potential in culturing fungi was evaluated for cost reduction since readymade PDA medium is expensive. For this study *D. alata* and *M. esculenta* tuber flour was taken and their solidification was tested at different concentration by adding small amount of agar and the time taken for solidification was compared with that of the control (PDA medium). Five (5) g of *D. alata* tuber flour with 1 g agar/100 ml and 5 g *M. esculenta* tuber flour with 1.4 g agar/100 ml showed complete solidification after 17 and 22 minutes, respectively. Culture discs of *Mucor* spp., *Penicillium* spp., *Fusarium* spp., *Rhizopus* spp., *Aspergillus* spp., *Sclerotium* spp. and *Trichoderma* spp. were transferred to the centre of the solidified test media and the control medium (PDA) separately. Their mean radial growth was measured at various time intervals and the results were analysed using analysis of variance (ANOVA) test followed by Tukey test. This study revealed that the *D. alata* and *M. esculenta* media were suitable for the growth of the fungi tested. Most of the tested fungi showed significantly higher growth on *D. alata* tuber medium compared to control and *M. esculenta*. Furthermore, with the extended incubation period, the mean radial growth of tested fungi also accelerated. After 72 hours of incubation, *Sclerotium* spp., and *Rhizopus* spp., exhibited maximum growth on *D. alata* medium which was followed by *Mucor* spp. and *Aspergillus* spp. On the other hand, *Mucor* spp., *Penicillium* spp., *Fusarium* spp., *Sclerotium* spp. and *Trichoderma* spp. revealed better growth on tested media compared to PDA after 72 hours of incubation. However, further studies are needed to identify the specific components that promote the growth of fungi.