Title In vitro antifungal activity of neem oil against banana pathogens

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Abstract

Neem, *Azadirachta indica* (Meliaceae), is a medicinal tree from India. Neem kernel oils obtained using a cold press and solvent extraction by the Soxhlet method were assessed for antifungal activity against 17 fungal strains isolated from banana fruit. These oils (used at different concentrations) significantly inhibited mycelial growth of 15 of the strains tested after 7 days exposure at 30°C by virtue of volatile compounds released from 100 µL of the oil. Volatile compounds present in the oils were characterized by SPME and GC-MS. This showed the presence of biologically active volatile compounds, such as organosulphur compounds, in all of the neem oils tested. These compounds are known to have antimicrobial activity. The *in vitro* results suggest that employing neem kernel oil as a fumigant to control post-harvest pathogens is worthy of further investigation.