

Genera of arbuscular mycorrhiza occurring within the rhizospheres of *Octomeles sumatrana* and *Anthocephalus chinensis* in Niah, Sarawak, Malaysia.

ABSTRACT

Octomeles sumatrana and *Anthocephalus chinensis* are two non-commercial tree species with future potential as plantation species in Malaysia. In order to understand the habitat in which such species grow, a study on the species as well as organisms related to them is crucial. The objectives of this study were to investigate the soil properties in which the two species grow and the associated mycorrhiza occurring within their rhizospheres. Results revealed that the properties of rhizosphere soils and the composition of arbuscular mycorrhiza varied with location. Based on the spore count method, the mean number of spores ranged from 45–142 per 50 g dry soil. The rhizosphere of *O. sumatrana* at the Niah Forestry Research Station recorded the highest number of spores. Meanwhile, the most probable number method showed values ranging from 6.5–16.0 per gram of dry soil, with the highest value recorded for *O. sumatrana* at the Niah National Park. *A. chinensis* showed the lowest values for both methods. *Glomus* was found to be dominant in the rhizospheres of both species followed by *Acaulospora* and *Gigaspora*. *O. sumatrana* was found to be a better host plant than *A. chinensis* in terms of supporting the sporulation of mycorrhiza. This is believed to be closely related to the ability of the root system to make the rhizosphere more suitable for reproduction and development of mycorrhiza spores, besides being affected by soil properties.

Keyword: Host plants; Most probable number; Mycorrhiza composition; Soil properties; Spore count.