## Effect of Arbuscular Mycorrhizal Fungi Inoculation on the Growth of *Lilium longiflorum* var. *formosanum*

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## Abstract

Lilium longiflorum var. formosanum, an endemic species to Taiwan, distributes all over the island. Recently, its population has been decreased gradually because of man-made destruction. How to recover its population has become an important issue. The purpose of this study is to explore the effect of arbuscular mycorrhizal fungi (AMF) on the plant growth by inoculating the plant seed and seedling with beneficial microorganisms. It is hoped that AMF will be able to help boost the growth of Lilium longiflorum var. formosanum in its habitats. The results of the experiment showed that Glomus clarum, Glomus etunicatum, Glomus fasiculatum - Glomus mosseae and Acaulospora sp. worked significantly on bulb circumference, which grows larger than that of the control. The results also showed Glomus clarum. Glomus fasiculatum and Glomus mosseae worked significantly on fresh weight of plant, which is heavier than that of the control. In general, plants inoculated with AMF grew better than the control in terms of bulb circumference and fresh weight of plant. The results of the experiment in this study can be used as references for the future application of AMF in any restoration plan of *Lilium longiflorum* var. formosanum.

Key Words: *Lilium longiflorum* var. *formosanum* Taiwan lily, Arbuscular Mycorrhizal Fungi (AMF), inoculation

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