# Effect of Fertilizer Treament and *Bacillus subtilis* Additives Applied on *Paphiopedilum*[1]

**Jing-Wen Chen**[2]

## Abstract

The objective of this study was to research the effects of beneficial *Bacillus* spp. and fertilizer treament on *Paphiopedilum spicerianum* of nitrogen uptaked and assimilated. Regular to investigated into nitrogen compounds and nitrate reductase activity, and analyze of nutritious elements on plant. *B. subtilis* applied and different fertilizer treament for 180 days on *Paph. spicerianum*, effective *B. subtilis* applied with Hi-control caused improve fresh weight relative growth rate of *Paph. spicerianum*. Regardless of the type of fertilizer, application of *B. subtilis* at 180 days after treatment that caused improve nitrogen content, soluble protein content and nitrate reductase activity of *Paph. spicerianum*.

**Keywords:** *Bacillus subtilis, Paphiopedilum,* Nitrate reductase, Nitrogen

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[2] Assistant Researcher of Taitung DARES, COA.