

Plant Growth Promoting Endophytic Microorganisms from Orchids for A Sustainable Agriculture

ABSTRACT

Conventional agriculture practice has heavily relied on chemical fertilizers to increase crop yield. However, long-term application of chemical fertilizers carries tremendous negative impact on the environment and is unsustainable. Hence, the search for an alternative source of fertilizers is required. Orchids are flowers and can be found in tropical countries. The growth and development of orchids are closely tied to the presence of plant growth promoting endophytic microorganisms (PGPM). PGPM harbours various beneficial traits such as potassium and phosphorus solubilization and indole acetic acid and siderophore production which enhance and support plant growth and development. This review article showed that PGPM isolated from orchids could be utilized in conventional agriculture to reduce dependency on chemical fertilizer.