# Petal power

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A team of plant experts from the Faculty of Applied Sciences, Universiti Teknologi MARA, have conducted research on the potential use of the plant growth regulators, paclobutrazol and uniconazole, to enhance flowering in Etlingera elatior.

The allure of Etlingera elatior (Malaysian Torch Ginger), commonly known as Bunga Kantan, in culinary and medicinal preparations is legendary. As this species has been gaining popularity as cut flowers in recent times, a team of plant experts from the Faculty of Applied Sciences conducted research on the potential use of the plant growth regulators, paclobutrazol and uniconazole, to enhance flowering. Application of plant growth regulators has been found to inhibit the vegetative growth but increase the flowering of Cucurma and Kaempferia species, from the same ginger family of Zingiberaceae as

reduced cell elongation and vegetative growth allows more energy to be utilized for flowering.

In view of this, the study focused on the use of these compounds in Bunga Kantan for the mentioned purposes. The plant, which is supported by stout rhizomes has large, leafy stems and stands between 2–6 m tall. The most attractive part of the plant is the flowering shoot or inflorescence head which consists of the conspicuous bracts and flowers. As the bract opens up, the lower ones turn down revealing a cone shaped torch, thus its name Torch Ginger.

According to the study conducted by Tsan Fui Ying, Farehan Fauzi, Sam Yen Yen, Zainuri Mohd Salleh and ZakariaTajudin, the vegetative growth of Etlingera elatior in terms of height, leaf area index, tiller number (development of vegetative shoots) and leaf number was inhibited by the application of paclobutrazol.

Inhibition effects, however, were only obvious after 3-4 months following the application of the plant growth regulator. Application of this compound at higher rates of 6 and 8 g/L resulted in compacted appearance of the plants and shiny green leaves.

Uniconazole, on the other hand, was not effective to inhibit the vegetative growth of Etlingera elatior. Treatment with this plant growth regulator at rates of 50mg/L applied twice and 75mg/L applied once or twice, however, could induce inflorescence development in this species. Their better flowering was thus tentatively attributed to the application of uniconazole.

And why do we care? As Malaysia is one of the richest regions for ginger diversity, for one, the discovery could help horticulturists explore the many underutilised ginger species which hold great potential as ornamental and horticultural plants.

Provided by Universiti Teknologi MARA (UiTM)

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