

Dealing with smaller melon plants

By Dr CHRISTOPHER TEH

Do you have a question about plants or how to maintain your garden? Send your questions to the Plant Doctor! Email your questions to lifestyle@thestar.com.my with "Plant Doctor" in the subject field. Questions may be edited for brevity and clarity.

Dear Plant Doctor,

Q I have grown rock melon quite successfully in the past two years. But since the start of this year, my melon plants have been growing with smaller leaves and stems. My previous melon plants had bigger than palm-size leaves and stems the size of my tiny finger. But now, I don't see healthy melon plants in my garden, all I see are small leaves and thin stems, making them produce small flowers, with 95% male flowers and hardly any female flowers. Moreover, the edges of the leaves become yellow and the green areas of the leaves are uneven, with patches of lighter green. The plants are not sick or diseased. I wonder if it is the hotter weather that is causing this problem? The soil, chemical fertiliser and watering amount are all set the same as the previous plants. Nothing has changed. Please advise me on how to rectify this situation. – *Peter Hoh*



Environmental stress and nutrient deficiencies can cause various issues in melon plants. – 123rf

Environmental stress and nutrient deficiencies can cause various issues in melon plants, such as small leaves, thin stems, a very high ratio of male to female flowers, yellow leaf edges and patchy green colours.

Extreme temperatures can lead to heat stress, which can be offset by providing partial shade, such as black netting.

Adjust the shade as needed until the plants show signs of recovery. Consistent watering is essential during hot weather to maintain moisture in the top 30cm of soil, avoiding both under- and over-watering. Mulching the soil surface with organic materials like compost can help retain moisture and regulate soil temperature.

After two years of growing rock melons, the soil may have become depleted of essential nutrients, particularly phosphorus and potassium, which are crucial for flowering and fruiting. Excessive nitrogen during this stage can promote leaf growth at the expense of flower development. Apply 10g of nitrogen (N), 20g of phosphorus pentoxide (P_2O_5) and 14g of potassium oxide (K_2O) per square metre. Phosphorus pentoxide and potassium oxide are often referred to simply as their elements, phosphorus and potassium, respectively.

Additionally, incorporating micronutrients such as 0.5g of zinc and 0.2g of boron per

square metre can be beneficial. A balanced fertiliser with added micronutrients (in particular, boron) can also be used as an alternative. Consider complementing your mineral fertilisers with organic fertilisers, such as compost, garden waste or bone meal, as a slow-release nutrient source.

Lastly, it is important to monitor soil pH. If the pH is below 5, mix 200-400g of agricultural lime (e.g. dolomite) per square metre into the topsoil to raise the pH. Keep in mind that the effects of liming may take several months to become apparent. Low soil pH can hinder nutrient availability to plants, so maintaining the proper pH range is crucial for optimal growth and development.

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