Chelated Iron and Magnesium Boost Productivity and Anthocyanins Content in Calyces of Hibiscus sabdariffa L.

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Abstract:

The present experiment was carried out to define the efficiency of foliar applications (3 times) with chelated magnesium (0, 200, 400 and 600 ppm) and iron (0, 150, 300 and 450 ppm) for improving growth, productivity and anthocyanins content in calyces of roselle. Results showed that calyces production and their contents of anthocyanins were significantly increased with increasing either Mg or Fe concentration. The combination of Mg at 600 ppm and Fe at 450 was the most effective combined treatment in stimulating number of leaves and flowers, flower weight per plant, calyces dry weight per plant, seed dry weight per plant, weight of 1000 seeds and calyces content of anthocyanins. However, calyx fresh weight attained the highest values when the medium concentration of Mg (400 ppm) combined with Fe at the highest concentration (450 ppm) was employed.

Keywords:

Roselle, foliar fertilization, pigments, vegetative growth

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