

RESPONSE OF CHLOROPHYTUM COMOSUM AND PEPROMIA CLUSTIIFOLIA TO SOME GROWTH REGULATORS

BY

Safaa , M . * and El-Dosouky , S . A . **

* Horticulture Dept .

** Agric . Botany Dept .

Faculty of Agric . , Moshtohor , Zagazig University ,
Benha Branch , Egypt .

ABSTRACT

The three growth regulators (paclobutrazol , ethrel and kinetin) differently affected the vegetative growth , chloroplast pigments , endogenous hormones and root fresh weight of the two ornamental plants (Chlorophytum comosum and Pepromia clustiifolia) .

As for growth , paclobutrazol and ethrel decreased the height of the plants while kinetin led to it's increase . Shoots fresh weight was significantly increased by the all growth regulator treatments . Kinetin significantly increased leaf area in the two plant types while ethrel increased this parameter in Chlorophytum comosum and decreased it in Pepromia clustiifolia . On the other hand , paclobutrazol significantly decreased leaf area in the both plant types . The three growth regulators generally increased the chloroplast pigments . Paclobutrazol was the most effective in this respect .

Paclobutrazol highly increased the root fresh weight followed by ethrel then kinetin in both plant types .

Paclobutrazol application decreased the endogenous content of gibberellin-like substances that cause the shortening of the plant height . Besides , ethrel treatment markedly increased the endogenous content of cytokinin-like substances that is why new suckers and branches were originally stimulated .