

EVIDENCE OF GROWTH STIMULATION BY LOW CONCENTRATION
OF GIBBERELLIN SYNTHESIS INHIBITORS

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There are several compounds used in ornamental production systems and in the care and maintenance of trees in urban landscapes because they are known to inhibit the synthesis of gibberellins via the isoprenoid pathway when applied at labeled rates. The consequence of this effect on plants is typically reduction of vegetative growth with a re-partitioning of assimilates to reproductive growth and fine root development. However, at low concentrations that may arise due to environmental degradation or misapplication of applied compounds, growth stimulation may occur. Examples of stimulation of growth in plants, trees, and cell cultures will be presented and possible explanations for this seemingly anomalous response related to energy production in mitochondria via the electron transport chain.