

(21)

**CURRENT AND POTENTIAL USES OF PLANT GROWTH REGULATORS  
IN FLORICULTURE AND ORNAMENTAL PLANTS**

**W. A. Mackay\* and N. Sankhla**

**Texas A&M University, TAES-Dallas, 17360 Coit Rd., Dallas, TX 75252-6599**

The key processes of interest in ornamentals are regulation of plant height, flowering, propagation of cuttings, increased branching, enhanced post harvest performance and longevity during shipping and marketing, and improved stress tolerance. Although PGRs are extensively used on high value floricultural crops, their use in production of nursery crops and the maintenance of landscape plants is beset with limitations which include inconsistent species specific response, cost effectiveness, limited label registration, and constraints of uncontrolled environments, application methods, variable cultural practices and a relative lack of resources to assist producers. This necessitates expensive prior "on site" trials at the level of grower. If these constraints can be addressed, new avenues may become available to growers. Finally, considerable success has been achieved in preventing injury induced by ethylene during storage, transport and retail display of ornamental plants and cut flowers resulting in enhanced longevity and display life. Products based on, both ethylene biosynthesis and perception inhibition (e.g., Retain, STS, 1-MCP), are being successfully used in commercial floriculture. This talk will highlight current, potential and unrealized opportunities related to use of PGRs in ornamental and floricultural crops.