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CONTENTS

biotechnology in weed control with particular emphasis on herbicide resistance in crops.

1810 NAGAR, PK; SAHA, S. 1985. **Distribution of cytokinin-like activity in different plant parts of the water hyacinth, *Eichhornia crassipes*.** *Physiologia Plantarum*, 64: 3, 328-332; 22 ref.

Cytokinin-like activity in extracts of leaf laminae, petioles, shoots, roots and flowers of young plants of *Eichhornia crassipes* was analysed using the soyabean callus bioassay. In all plant parts analysed, 2 prominent peaks of cytokinin activity having elution vol. similar to zeatin and zeatin riboside were detected. Putative cytokinin glucoside-like activity was detected only in leaves and flowers. The cytokinin complements of the leaves and the roots were qualitatively different. It would appear that cytokinins supplied by the roots were metabolized in the leaves or that certain cytokinins were synthesized in the leaves themselves. The possible significance and distribution of cytokinins in different plant parts in relation to roots is discussed.

1811 RAM, RL; SINGH, MPN. 1991. **In vitro haustoria regeneration from embryo and in vitro formed leaf callus cultures in *Dendrophthoe falcata (L.F.) Hings*.** *Advances in Plant Sciences*, 4: 1, 48-53; 14 ref.

Embryo and leaf calli of *D. falcata* grown in modified White's medium showed concn-dependent differentiation of haustoria on exposure to IAA and IBA. Concn >4 ppm stimulated additional haustoria differentiation from callus cultures. White's medium containing IBA 5 ppm and casein hydrolysate 2000 ppm was ideal. Increasing the concn of IBA from 5 to 10 ppm suppressed haustoria differentiation but caused profuse callusing. To a certain extent the formation of haustoria from callus cultures could be chemically controlled.

AROMATIC PLANTS

1812 KOTHARI, SL; CHANDRA, N. 1986. **Adventitious shoot production from stem internode and callus cultures of *Artemisia scoparia* Waldst. et Kit.** *Journal of Plant Physiology*, 124: 5, 409-412; 12 ref.

A. scoparia is used for the isolation of scoparone, a compound with hypotensive and tranquillizing properties. Stem internode sections and callus derived from them (on a medium containing 0.5 mg/litre kinetin and 1 mg/litre IBA) were cultured on Murashige and Skoog media supplemented with various cytokinins and/or auxins. Shoot differentiation in explant and callus cultures occurred only with IAA and BA combinations and the best results were obtained with high IAA/BA ratios. No shoot differentiation occurred when auxins or cytokinins were used singly. Explants formed roots with IAA, NAA or 2,4-D alone, but not with IBA; no root differentiation occurred in the presence of cytokinins. Callus cultures formed roots with IAA, IBA, NAA or 2,4-D (1 mg/litre), but IBA at 3 mg/litre gave the best results; kinetin or BA at low concentrations (0.1-0.5 mg/litre) also induced rooting.

1813 PHILIP, VJ; NAINAR, SAZ. 1986. **Clonal propagation of *Vanilla planifolia* (Salisb.) Ames using tissue culture.** *Journal of Plant Physiology*, 122: 3, 211-215; 15 ref.

Plantlets were produced in vitro from aerial root tips taken from elite vines and cultured on Murashige & Skoog medium. This rapid multiplication method is recommended for the production of material free from *Fusarium batatatis var. vanillae*.

1814 PHILIP, VJ; PADIKKALA, J. 1989. **The role of indoleacetic acid in the conversion of root meristems to shoot meristems in *Vanilla planifolia*.** *Journal of Plant Physiology*, 135: 2, 233-236; 13 ref.

Aerial root tip explants cultured in MS media containing more than 5 mg/litre IAA continued to grow as roots, but the root meristem of young tips grown in media containing 1-5 mg/litre IAA developed into shoots and plantlets. Scanning the root tip extracts for IAA using UV, TLC, GLC and GC-MS showed higher levels of auxin in root tips from old aerial roots and also in young cultured tips in which the root meristem had transformed to shoots.

ORNAMENTAL PLANTS

1815 BHATTACHARYA, PS; BHATTACHARYYA, BC; BHATTACHARYA, PS; DAS, N; DEY S. 1990. **Table-top *Chrysanthemum garden*.** *Chrysanthemum (NCS, USA)*, 46: 3, 150-151.

1816 BHATTACHARYYA, PS; MAITI, TK; BHATTACHARYYA, BC. 1990. **New cost effective method of rooting of in vitro grown ornamental plants.** *International Symposium on Industrial Biotechnology*. (Hyderabad, India: 1990: November 18-20). Osmania University. p. 44.

1817 PRADESH, JITENDRA. 1988. **Plant health. A useful service for large scale propagation of ornamental plants through micropropagation.** *Acta Horticulturae*, No. 226: 115-120; 2 ref.