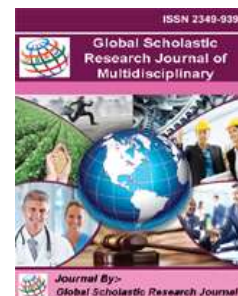




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**INFLUENCE OF POLYETHYLENE GLYCOL ON SOME
MORPHOLOGICAL AND PHYSIOLOGICAL CHARACTERIZATION OF TWO
CHILLI PEPPER CULTIVARS (CAPSICUM ANNUUM L.) IN VITRO**

EL -KAABY EKHLAS A.JASIM¹

¹Department of Genetic Engineering, Biotechnology Center, Ministry of Science and
Technology, Baghdad 10001, Iraq

Abstract

Shoot tips propagated *In vitro* from local chilli pepper and Ampala hybrid , exposed to drought stress in the presence of polyethylene glycol (PEG MW6000) at concentration of (0, 10,30 and 70) g.l⁻¹ which were supplied in MS Media .after 6 weeks, number of shoots per explants, plant height (cm) and shoots dry weight (mg) in addition to proline, ascorbic acid and capsaicin were recorded. The results revealed that, high concentration of PEG affected negatively on number of shoots and plant height which reached (8.5 shoots/explants, 24.6 cm) and (10.5 shoots/explants, 11.9cm) for local and Ampala chilli pepper respectively. While adversely results were observed in related to shoots dry weight which recorded highest mean at 70 gm.l⁻¹ PEG reached (19.04 mg and 17.09 mg) for local and Ampala chilli pepper respectively. Regarding to Proline, Ascorbic acids and Capsaicin response, all physiological parameters, were found to have a positive reaction and higher accumulation were recorded at the level 70 g.l⁻¹ of PEG reached (18.11,19.71µg.g⁻¹ proline). (18.07, 27.14 µg.g⁻¹ ascorbic acid) and (22.95, 30.43 µg.g⁻¹ capsaicin) for local chilli and Ampala hybrid respectively.

Key words: Chilli pepper, *in vitro*, PEG.

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