

POSSIBILITY OF IMPROVING GROWTH, PHYSIOLOGICAL BEHAVIOUR AND YIELD OF CANOLA PLANTS CULTIVATED IN SALINE RECLAIMED SOILS WITH APPLICATION OF HUMIC AND ASCORBIC ACIDS

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ABSTRACT: *The possibility of enhancing growth physiological behaviour and yield of canola plants grown under reclaimed soil with salinity level of about 9000 ppm was investigated in the Experimental Farm, Faculty of Agriculture, Fayoum University, Fayoum, Egypt, during 2007/2008 and 2008/2009 seasons. For verifying this aim, the plants produced from humic acid treated- or untreated-seed beds were sprayed with ascorbic acid at the rates of 0 (control), 150, 300, 450 and 600 mgL⁻¹. Significant increments in growth traits (plant height, number of leaves plant⁻¹, total leaves area plant⁻¹ and dry weight of leaves plant⁻¹), chemical constituents (photosynthetic pigments, some photosynthates, some macro-and micronutrients) and canola yields (seed yield plant⁻¹ and feddan⁻¹ as well as seed oil and protein yields) were obtained by application of humic acid alone or in combination with all ascorbic acid applications. As for ascorbic acid, plants sprayed with all studied rates revealed significant increases in all aforementioned parameters with the super results were obtained from the rate of 450 mgL⁻¹ as compared with untreated plants. Thereon, the study led us to be concluded that canola plants "cv. Serw 4", produced from humic acid fecundated-seed beds and sprayed with 450 mgL⁻¹ ascorbic acid solution tackled them to overcome the adverse conditions of reclaimed soils particularly, salinity up to 9000 ppm and consequently, and consequently produced economic seed and oil yields.*

Key Word: *Canola, Yield and Quality, Chemical Growth, Humic and Ascorbic Acids, Reclaimed Soils.*