

تأثير مياه المجارى على الأيض والمحصول فى نبات الفول البلدى

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## EFFECT OF SEWAGE WATER ON GROWTH, METABOLISM AND YIELD OF FABA BEAN PLANTS

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**ABSTRACT:** Two pot experiments were conducted under greenhouse conditions to study the effect of sewage water on growth analysis, water relations, plant pigments, certain biochemical composition and yield of faba bean plants. This experiment was performed in the Department of Agricultural Botany, Faculty of Agriculture, Minoufiya University, during successive season of 2008/2009. The sewage water was diluted with tap water to give three rates of 25, 50 and 75% used in irrigation. Plant sample was successively taken at random from every treatment starting 45 DAS. The results showed that sewage water increased all growth characters, total protein, total carbohydrates, activity of enzymes and proline as well as yield. The concentration of Zn, Mn, Cd and Pb were increased greatly in the different faba bean organs in response to sewage water application. Photosynthetic pigments, rate of water loss, relative water content were decreased by of sewage water Irrigation.

**Key words:** Sewage water, Faba bean, Growth, Enzymes activity, Heavy metals, Yield