



جامعة الفيوم  
كلية الزراعة  
قسم الاراضي والمياه

ملخصات الابحاث المقدمة من الدكتور/ عبد الناصر أمين أحمد عبد الحفيظ

المتقدم للجنة العلمية الدائمة للأراضي والهندسة الزراعية لترقية الأساتذة المساعدين والأساتذة

البحث الرابع

**Abdel-Hafeez, A. A. A., Abd El-Mageed T. A. and Rady M. M., 2019. Impact of ascorbic acid foliar spray and seed treatment with cyanobacteria on growth and yield component of sunflower plants under saline soil conditions. International Letters of Natural Sciences, ISSN: 2300-9675, Vol. 76, pp 136-146.**

تأثير الرش الورقي لحمض الأسكوربيك ومعالجة البذور بالسيانوبكتريا على نمو وإنتاجية نباتات عباد الشمس تحت ظروف التربة الملحية.

الملخص باللغة الانجليزية

A field experiments were conducted during the two summer seasons of 2015 and 2016 in saline soil ( $E_{c} = 9.0$   $dSm^{-1}$ ), at Fayoum province, Egypt to study the effect of ascorbic (AsA), as foliar application alone or combined with cyanobacteria (CB) on growth, yield, its components and nutritional status of sunflower plants variety Sakha 54. Treatments comprised 2 ascorbic acid (AsA) levels with or without seed inoculation with cyanobacteria (CB). They were 1 mM AsA, 2 mM AsA, 1 mM AsA + CB and 2 mM AsA + CB in addition to the control treatment in which seeds were not received CB and their plants were sprayed with distilled water. Results could be summarized as follows: increasing the addition of ascorbic acid concentration up to 1Mm with combination of CB increased significantly values of growth attributes (e.i., plant height, of leaves no./plant, shoot dry weight and leaf area), photosynthetic pigments (chlorophyll a, b and carotenoids), physiological responses (total soluble sugars, proline and soluble phenols) as well as the head diameter, seed yield/ plant, 100 seed weight and seed yield ( $t ha^{-1}$ ). Also, N, P, K, Fe, Mn, Zn and oil percentage of sunflower seeds with compared to control treatment in both years. Generally, the results in most cases, demonstrate that the all parameters increased significantly by using the concentration of ascorbic acid 1Mm combined with CB in both seasons.