Effect of biofertilizers, nitrogen and phosphorus fertilizers on growth, yield and yield component of sunflower grown in El Kharga Oasis, New Valley


Abstract:

NULL Field experiment was conducted for two successive summer seasons of 2007/2008 and 2008/2009 at the Experimental Research Station of the Desert Research Center at El-Kharga Oasis, the New Valley governorate. The objective of this work was to study the effect of bio, nitrogen and phosphorus fertilizers on the growth, yield and yield components of sunflower crop. Results indicated that application of biofertilizer had significant effect on plant height, head diameter, 1000-seed weight, seed yield and oil% in seeds and oil yield respectively in the second growing season. Biofertilizer increased seed yield (kg/fed) and oil yield (kg/fed) by 11.0%, 12.0% and 16.6%, 14.0% over the control in the first and second growth seasons respectively. Nitrogen fertilization at rates of 30, 60 and 90 kg/fed, significantly resulted in increases in all studied parameters. Addition of nitrogen fertilizer at 90 kg N/fed gave the highest seed and oil yields in the two season when compared with 30 and 60 kg/fed. Results also showed that application of phosphorus at rates of 0, 15 and 45 P2O5 kg/fed were of highly significant influence on all studied traits.

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