

- Document Type** : Thesis
- Document Title** : *Systematic studies on soil algae isolated from a cultivated Field in Western Region, Saudi Arabia*
دراسات تقسيمية على طحالب التربة المعزولة من أحد الحقول الزراعية بالمنطقة الغربية من المملكة العربية السعودية
- Document Language** : Arabic
- Abstract** : This investigation embraces two main groups of studies; namely physico-chemical characteristics and algaepopulation. This study was performed three times from 1.2/1992, 10/1993(12/1992, 4/1993 , 10/1993). These variations were followed in soil samples collected from soil surface of Triticum aestivum L., Solanum melongana L., Lactuca sativa L., Cucuntis sativus L., Medicago sativa L. and tree of Punica granatum L. (a cultivated field m Western Region, Saudi Arabia). The results could be summerised as follows: Mean pH value of samples recorded to be always on the alkaline side (7.79-8.35). Mean biomass and organic carbon values of all soil samples showed generally irrigrular variation during the period of study. Biomass mean ranged between 1.2 gm/ m2 (Lactuca) and 13.14 gm/m2 (Cucumis) , however, organic carbon changed from 4.98 gm/m2 (Medicago) and 13.02 gm/m2 (Solanum). The mean value of humidity changed from 6.01% (Triticum) to 16.93% (Punica). The mean value of total nitrogen ranged between 1.39 gm/m2 (Cucunzis) and 3.48 gm/m2 (Punim). The mean value of soluble salts showed somewhat irregular variations during the period of study changed from 25.89 gm/ m2 (Lactuca) to 110.81 gm1m2 (Cucumis). Thirty four species and two variaties belonging to 14 genera of algae were identified from the soil crust samples of the six plants under investigation during the period of study. Twenty eight species and two varieties belonging to nine genera of Cyanobacteria. Four species belonging to 3 genera of Chlorophyta. Two species (two genera) belonging to diatoms. NavilUla cryptocephala var. venata was isolated from soil samples of all plants under study. Soil samples of all plants except Lactuca sativa contained Plectonema nostocorum. Moreover, Anabaellll naviculoides found in all samples except samples -of Cucumis sativlls. However, Lyngbya aerugitleo-coerulea isolated from all samples except samples of Medicago sativa. Gloeotllece rupestris, Chlamydomonas 0llata and Nitzschia tryblionella- VC\J:". levidensis isolated from soil samples of TritiCllllll aestivum only and Atlabaena ambigua was isolated from soil samples of Lactuca sativa only. Nostoc passerianunl isolated from soil samples of Cucumis sativus only. Moreover, Gloeocystis gigas isolated from soil samples of Punica granatum only. Nostoc punctiformle var. populorum, N. linckia var. aroense, N. commune, Anabaena variabilis Var ellipsospora, Lyngbya scotti, Schizothrix ,\penidllata, Chlanlydomonas altera isolated from soil samples of Solanum melongana only.
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