

## 7. REFERENCES

- Abd-Allah, A.E. (1988).** Effect of water quality on some physical, chemical and pedological characteristics of soils. Ph.D. Thesis, Fac. Agric. Ain-Shams, Univ. Egypt.
- Abdel-Aal, Sh.I.; El-Demerdashe, S.; Khalil, M.N. and Naga, M.A. (1976).** Mineralogy of the clay fraction of the Fayoum soils. A.R.E. Desert Institute, Bull, A.R.E. 26 No. 2, PP: 225-262.
- Abdel-Aal, Sh.I.; Shahin, R.R.; Abdel-Hamid, M.A. and Abdel-Tawab, M.M. (1988).** Impact of liquid wastes of industrial complex at Helwan on water quality of both Nile and canal streams. Egypt J. Soil, Sci. 28, No. 4, PP 421-432.
- Abdel Aziz, W.H. (1992).** Study on soil pollution in El-Saff Region. M.Sc. Thesis, Fac. of Agric. Ain-Shams Univ. Egypt.
- Abdel-Fattah, K.S. (1977).** Effect of varying calcium - magnesium ratios on micronutrients uptake by wheat (*Triticum durum*) in a water culture experiment. Egypt J. Soil Sci., 17: 67-77.
- Abdel-Hadi, A.H.; Alexander, A. and Doering, H.W. (1982).** The effect of substrate salinity on dry matter production and phosphate uptake by bush beans. Egypt J. Soil Sci. 22: 31-40.
- Abdellah, H. (1995).** Chemical studies on the effect of irrigation by polluted water on some Egyptian soils. Ph.D. Thesis, Fac. Agric., Zag. Univ. Banha Branch.
- Abdel-Maksoud (1993).** Studies on risks associated with the presence of selected contaminants in irrigation and drainage water in Giza Governorate. M.Sc. Thesis, Institute of Environmental studies and Research, Ain-Shams Univ., Egypt.
- Abdel-Mottaleb, S.M.; Abdel-Aziz, S. and Dimian, W.N. (1986).** Boron-nitrogen interrelationship in barley plants. Annals of Agric Sci., Moshtohor V. 24 (2).
- Abdel-Naim, M. and El-Awady, R.M. (1990).** Effect of potassium and zinc application at two irrigation intervals with sewage water on the grain yield of corn in sandy soil. 10<sup>th</sup> World Fertilizer Congress of CIEC 21-27 October 1990 Nicosia-CYPRUS.

**Abdel-Reheem, M.A.; El-Awady, R.M. and Faltas, R.I. (1986).** Changes and distribution of nitrogen, phosphorus and potassium in sandy soils irrigated with sewage water. Bull. Fac. of Agric., Cairo Univ., Vol. 37 No. 2 (1986).

**Abdel-Reheem, M.A.; Faltas, R.L.; El-Awady, R.M. and Ahmed, W.E. (1986).** Changes of trace elements in sandy soil irrigated with sewage water. Bull. Fac. of Agric. Cairo Univ. Vol. 37 No. 2, PP. 969-977.

**Abdel-Salam, M.A. and Abu-El-Nour, S.O. (1967).** Interaction of saline water irrigation and nitrogen fertilization on corn production in calcareous soils. Desert Instit. Bull, Tome XIII No. 2 PP 1-13.

**Abdel-Tawab, M.M. (1985).** Soil pollution as affected by some industrial wastes at Helwan-El-Saff area. M.Sc. Thesis, Fac. of Agric., Cairo Univ., Egypt.

**Abdullah, M.I.; Royle, L.G. and Morris, A.W. (1972).** Nature, London, 235: 158. C.F. Bowen, H.J.M. (1979). Environmental Chemistry of the elements.

**Abdullah, M.I. and Royle, L.G. (1974).** J. Mar., Biol. Ass., U.K., 54: 581: C.F. Bowen, H.J.M. (1979). Environmental chemistry of the elements.

**Aboul-Roos, S.A.; Holah, Sh.Sh. and Badawi, S.H. (1989).** Influence of prolonged use of sewage effluent in irrigation on heavy metals accumulation in soils and plants. Z. Pflanzenernahr. Bodenk, 152: 51-55.

**Abou Seeda, M.; Soliman, S.; Khater, S. and Salem, N. (1992).** Movement and distribution of Fe, Mn, Zn and Cu in sandy soil as affected by the application of sewage sludge. Egypt J. Soil Sci., 32, No. 3 PP 319-330.

**Abu-Sinna, M.A.; Somya, A.H.; Selem, M.I. and Kandil, N.F. (1994).** Effect of irrigation with Bahr-El-Baqar drain water on III. Some soil physical properties. Com. Sci. and Dev. Res. No. 689 V. 46: 131-149.

**Academy of Scientific Research and Technology (1984).** Micro-nutrients and clay mineralogy of the soils of Egypt. Report No. 9.

**Afifi, M.Y.; Awadalla, S.Y. and Mohamed, S.A. (1979).** Studies on pertinent factors governing the retention and availability of soil moisture. The 4<sup>th</sup> Inter. Conf. on Statistics, computer science and social Research, 25-29, Mar. Ain-Shams Univ., Egypt.

**Ageeva, L.R. (1962).** Questions on salt-water regime using data of lesimetrical experiments. Isvestia an Turkmen SSR. No. 6 Series Biologitshiskikh Nouk.

**Ahmed, R. and Abdullah, Z.N. (1979).** Saline agriculture under desert conditions. Advance in desert and arid land technology and development, I: 593-618.

**Allam, S.E.M. (1986).** Effect of irrigation with sewage water on some physical and chemical properties of some Egyptian soils. M.Sc. Thesis, Fac. Agric., Zagazig Univ., Egypt.

**Amer, M.N. and Van der zel, H.J. (1983).** The Egyptian - Dutch advisory panel on land drainage: its activities and impact. Reprint of an article from the 1982. Annual report of the International Institute for Land Reclamation and Improvement with lists of panel publications. Ministry of Irrigation, Water Res. Center, Drainage Res. Institute.

**Anderson, A.J. and Nilson, K.O. (1976).** Influence on the levels of heavy metals in soil and plant from sewage sludge used as fertilizer. Swedish J. Agric. Res., 6: 151-159.

**Andriesh, S.V.; Dikumar, I.G. and Turtury, N.A. (1971).** Effect of mineral fertilizers on grain yield and quality of maize on leached chernozem soils in Moldovia. Agrochimya, 9, 71. (C.F. Field crop abs. 25, 3190, 1972).

**Awad, F.A.M. (1969).** The effect of different salts concentrations in irrigation water on the physical and chemical properties of different textured soils. M.Sc. Thesis, Fac. of Agric. Ain-Shams Univ. Egypt.

**Awad, S.S.M. (1991).** Influence of sewage sludge on some soil characteristics and plant growth. Ph.D. Thesis, Fac. Agric., Cairo Univ., Egypt.

- Awadalla, A.A. (1993).** Mineralogical and physical properties of some soils at El-Fayoum Governorate and their relation to soil fertility, M.Sc. Thesis, Fac. Agric. Fayoum, Cairo Univ. Egypt.
- Ayers, R.S. and Westcot, D.W. (1976).** Water quality for agriculture, irrigation and drainage. Paper 29., FAO, Rome, PP: 97
- Ayers, R.S. and Westcot, D.W. (1985).** Water quality for agriculture. Irrigation and drainage. pp. 29. Rev. 1 Food and Agric. Organ of U.N. Rome.
- Balba, A.M. and El-Etriby, F. (1980).** The quantitative expression of the effect of water salinity growth and nutrient absorption. LSSS. Symp. on salt affected soils, Karnal, India 451-456.
- Barakat, M.A.; Fakhry, S.I. and Khalil, M.A. (1971).** Relative Salt tolerance in 15 varieties of Egyptian Cotton. Agric. Res. Rev., 49: 191-200.
- Basta, E.Z.; Philip, G. and Khalil, J.B. (1974).** Clay mineralogy of some soil sediments from Fayoum area and Nile valley, Egypt. Egypt J. Soil Sci., 14 No. 1. PP 75-91.
- Bear, F.E. (1964).** Chemistry of the soil. Beinhold Publishing Corp., New York, U.S.A.
- Bear, F.E. (1975).** Chemistry of the soil. Beinhold publishing Corp. New York, USA.
- Behel, D.Jr.; Nelson, D.W. and Sommers, L.E. (1983).** Assessment of heavy metal equilibria in sewage sludge treated soil. Journal of Environmental Quality, 12 (2): 181-186.
- Benes, P.; Geissing, E.T. and Steinnes, E. (1976).** Water Res., 10: 711. C.F. Bowen, H.J.M., 1979. Environmental chemistry of the Elements.
- Bingham, F.T. and Strong, J.E. (1987).** Effect of salinity and varying boron concentration on boron uptake and growth of wheat. Plant and Soil, 97: 345-351.
-

- Black, C.A. (1982).** Methods of Soil Analysis. Soil Science Society of American, Inc. Publisher, Madison, Wisconsin, U.S.A.
- Blakeslee, P.A. (1973).** In Recycling Municipal sludges and effluents on land-Grant colleges, Washington DC. C.F. Bouwer, H. and Chaney, R.L. Land treatment of waste water. Adv. Agron., 26: 133-176.
- Bower, C.A.; Ogata, G.; and Tucher, J.M. (1969).** Root zone salt profiles and alfalfa growth as influenced by irrigation water salinity. Agron. J. 61:78.
- Bresler, E.; Mc Neal, B.L. and Carter, D.L. (1982).** Saline and sodic soils. Springer - verlag, Berlin, Heidelberg, N.Y.
- Brown, G. (1961).** The X-ray identification and crystal structures of clay minerals. Mineralogical Soc. of Great Britain, Monograph, London.
- Carter, D.L. (1969).** Managing moderately saline irrigation waters. Univ. Idaho Curr. Inf. Ser. No. 107.
- Chapman, H.D. and Pratt, P.F. (1961).** Methods of analysis for soils, plants and waters. Division Agric. Sci., Univ. Calif. U.S.A.
- Chavan, P.D. and Karadge, B.A. (1980).** Influence of Salinity on mineral nutrition of peanut (*Arachis hypogea L.*). Plant and Soil, 54: 5-13.
- Dahdoh, M.S.A. and El-Hassanin, A.S. (1994).** Combined effect of organic source, irrigation-water salinity and moisture level on the growth and mineral composition of barley grown on calcareous soil. Egyptian J. Appl. Sci., 9(9) PP 528-542.
- Dahiya, S.S. and Sigh, M. (1976).** Effect of salinity, alkalinity and iron application on the availability of iron manganese, phosphorous and sodium in pea (*Pisum sativum*) crop. Plant and Soil 44: 697-702.
- Deo, R.A.M.; Baser, B.L. and Ruhel, D.V.S. (1968).** Effect of sodium salts on the growth and mineral composition of bajra (*Pennisetum typhoides*). Ann. Arid Zone, 7: 100-104.

- Devitt, D.; Jarrell, W.M. and Stevens, K.L. (1981).** Sodium-potassium in soil solution and plant response under saline conditions. *Soil Sci. Soc. Amer. J.*, 45: 80-86.
- Eaton, F.M. (1950).** Significance of carbonate in irrigation water. *Soil Sci.*, 69: 123-133.
- Eaton, F.M.; Olmstead, W.R. and Taylor, O.C. (1971).** Salt injury to plants with special reference to cations versus anions and ion activities. *Plant and Soil*, 35: 433-547.
- Eissa, A.M. (1986).** The soluble salts effect on some soil properties and plant growth. M.Sc. Thesis, Fac. Agric., Al-Azhar Univ., Egypt.
- El-Agrodi, M. (1976).** Physiological characteristics of cotton plant under different levels of salinity and moisture in soil. M.Sc. Thesis, Fac. Agric., Zag. Univ., Egypt.
- El-Awady, R.M.; Noor-El-Din, Y.; Abdel-Naim, M. and Abdel-Reheem, M.A. (1987).** Effect of phosphorous and potassium fertilization at different irrigation intervals with sewage water on the nutrients uptake and yield of lupine (*Lupinus TERMS*) in sandy soils. Zagazig Univ., Fac. of Agric. Sci., Moshtohor. Moshtohor, *Annals of Agric. Sci. Moshtohor*, Tukh, A.R.E.
- El-Bogdady, F.A.F.; Abdel-Aal, R.M. and Ismail, S.N. (1969).** Effect of Burullus lake brackish water on the distribution of salts and on the soil profile formation in soils adjacent to the lake. *Agric. Res. Rev.*, Egypt, 47: 58-80.
- El-Damaty, A.H. and Moubaretk, M. (1962).** Studies on virgin sandy soils at the Tahreer province of the U.A.R. Part II. Monuring effect on barley and corn yields. *J. Soil Sci. U.A.R.* (1962), V. 2, No. 2, (255-240).
- El-Demirdashe, S. (1970).** Studies on the nature of interference between the alluvial and desert soils in the western border of Nile Delta. Ph.D. Thesis, Fac. Agric. Cairo Univ. Egypt.

- El-Gabaly, M.M. and Khadr, M.M. (1962).** Clay mineral studies of some Egyptian Desert and Nile alluvial soils. *J. Soil Sci.*, 13(2) PP. 333-342.
- El-Gamal, I.M. (1980).** Evaluation of Cairo liquid sewage sludge applied to soil with special consideration to its heavy metal content. M.Sc. Thesis, Fac. of Agric., Ain-Shams Univ., Egypt.
- El-Gazzar, A.A. (1983).** The rate of development of sandy soils as indicator to crop production. M.Sc. Thesis, Fac. Agric. Zagazig Univ. Egypt.
- El-Gharably, G.A. and Bussler, W. (1985).** Critical levels of boron in cotton plants. *Zeitschrift fur pflanzenernahrung und Bodenkunde* (1985) 148: 681-688. (C.F. Soil and Fert. 1987 Vol. 50 (6048).
- El-Halawany, K.S.A. (1978).** Studies on certain micronutrients in some Egyptian soils under reclamation. M.Sc. Thesis, Fac. Agric., Ain-Shams Univ. Egypt.
- El-Hifny, M.Z.; Khalifa, E.M. and Ghoneim, M.F. (1975).** The use of saline water for irrigation cotton. *Egypt J. Soil Sci.*, Special Issue, PP 227-236.
- El-Hinedy, M.I.; Agiza, A.H. and Ibrahim, M.E. (1958).** Studies on the nitorgen of corn plant. III. The effect of different level of calcium nitrate on the chemical composition of corn plant with particular reference to phosphorous and calcium constituents. Bull. No. 171, Fac. Agric. Cairo Univ.
- El-Keiy, O.M. (1983).** Effect of sewage sludge on soil properties and plant growth. Ph.D. Thesis, Fac. Agric. Alex. Univ. Egypt.
- El-Khatib, S.A. (1976).** Manganese and zinc relationship with soil and plants. M.Sc. Thesis, Fac. Agric., Alex. Univ.
- El-Khodary, I.M. (1964).** A study on the effect of quality of irrigation water and method of irrigation on the soil and plant in the western desert coastal zone area. Dip. In land Reclamation, Alex. Univ., Egypt.

- El-Kholei, M.S.; Hamdi, M. and Wasif, S. (1982).** A comparative study of the effect of cations and anions on hydrolysis and nitrification of urea phosphate. Egypt. J. Soil Sci., 22: 189-197.
- El-Kholi, A.F.; El-Damaty, A.H.; Hamdi, H. and Hamdi, A.A. (1970).** Interrelationship between soil properties and soluble boron. U.A.R. J. Soil Sci., V. 10 No. 2, 267-279.
- El-Kommos, F.C. (1983).** Soil moisture characteristics as influenced by structure and texture I. Intensity variable. J. Soil Sci. Egypt. 23; 2: 129-138.
- El-Leboudi, A.; Yousry, M. and Nofal, M. (1982).** Effect of carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>) as source of air pollution on certain nutritional elements by Kafor plants. Annals Agric. Sci., 27 (1-2): 327-338.
- El-Mansey, M.M. (1965).** Studies on the effect of total and specific concentrations of salts in irrigation water on soil properties and plant growth. M.Sc. Thesis, Fac. Agric. Ain Shams Univ., U.A.R.
- El-Nashar, M.B. (1985).** Effect of sewage water on soil properties of the Egyptian soil. Ph.D. Thesis, Fac. of Agric., Monofia Univ. Egypt.
- El-Nennah, M.; Ismail, A.S. and El-Halawany, K. (1980).** Preliminary studies on some micronutrients in recently reclaimed soils in Egypt. Egypt J. Soil Sci., 20: 145-149.
- El-Nennah, M.; El-Kobbia, T.; Shehata, A. and El-Gamal, I. (1982).** Effect of irrigation loamy sand soil by sewage effluents on its content of some nutrients and heavy metals. Plant and Soil, 65: 289-292.
- El-Rashidi, M.A. (1965).** Status of boron and its behaviour in the Nile alluvial soils. M.Sc. Thesis, Ain Shams Univ., Cairo.
- El-Saady, S.A.A. (1991).** Study on pollutants in Egyptian soils "Effect of some heavy metals on plants and soil". M.Sc. Thesis, Fac. Agric., Kafr-El-Sheikh, Tanta Univ., Egypt.



- El-Saidi, M.T. (1973).** Effect of different salinity levels on growth development and some physiological processes of cotton plant. I. Effect of adding salts before sowing. Zeitschrift Fur Acker-und pflanzenbau 1973, 138 (4) 331-340 (C.F. Fi. Crop Abs., 1974, 5900).
- El-Samanoudi, I.M. (1992).** Impact of applying drainage water on hydrophysical properties of clayey soils in Fayoum Depression. Egypt, J. Soil Sci., 32 No. 3 PP. 373-390.
- El-Sawaby, M.Sh. and Abu-El-Anine, A.A. (1977).** Effect of quality of irrigation water on the chemical properties of the soils. Agric. Res. Review, 55: 207-210.
- El-Sawaify, A.S. and Swindal, L.D. (1970).** Effect of saline water on the chemical properties of some tropical soils. Soil Sci. soc. Amer. Proc., 34: 207-210.
- El-Sayed, A.H. (1990).** Effect of drainage water quality on soil plant. M.Sc. Thesis, Fac. of Agric., Ain Shams Univ., Egypt.
- El-Sebaey, M.M. (1995).** Studies on chemical pollution of different water sources with some heavy metals in Fayoum Governorate. M.Sc. Thesis, Fac. of Agric., Moshtohor, Zagazig Univ., Benha branch.
- El-Shabassy, A.I.; Matkess, A.I.; Zikry, B.S.; Abdel-Malek, S.H.; Hassan, H.K.; Mayrooz, F.I. and Abdel-Naim, E.M. (1971).** Effect of sewage water on the properties of sandy soils (El-Gabal El-Asfer). Agric. Res. Rev. Cairo, March, PP 1-10.
- El-Shikha, S.A. (1994).** Effect of pollution on soil and plant. M.Sc. Thesis, Fac. Agric., Menofia Univ., Egypt.
- El-Sokkary, I.H. and El-Keiy, O.M.Z. (1983).** Enrichment of heavy metals in soils and plants by sewage and chemical fertilizers application. Proc. Int. Conf. Env. Haz. Agrochem., Vol. 2: 859-872. Nov. 8-12, 1983. Alex. Egypt.
- El-Tabey, H.M. (1993).** The effect of some trace elements on soil productivity. M.Sc. Thesis, Fac. of Agric., El-Azhar Univ., Egypt.

- El-Tony, M.A. (1982).** The effect of the physical and chemical properties of south Delta soils on their moisture characteristics. Ph.D. Thesis, Fac. Agric. Ain Shams Univ. Egypt.
- El-Toni, M.A.; Tadros, S.E.; Awadalla, S.Y. and El-Sersawy, M.M. (1990).** Effect of organic manuring and irrigation water qualities on the productivity of Maryut and Ras-El-Hekma calcareous soils. Desert Inst. Bull., A.R.E., 40, No. 1 PP 17-37.
- El-Toukhy, M.M. (1987).** Studies on the status of some nutrient elements in the soils adjacent to Idko lake (Beheira Governorate). M.Sc. Thesis, Fac. of Agric., Cairo Univ., Egypt.
- El-Wakeel, A.F.; Zikri, B.S. and El-Galla, A.M. (1985).** Assessing the suitability of the Nile Delta area for irrigation. Agric. Res. Rev. Egypt, 63: 71-84.
- Fakhry, A.A.; Anis, B.B.; Higazy, H.H. and El-Anany, F.A. (1987).** Technogenic contamination of soil and plants by wastes water from kaha chemical factory. Egypt. J. Soil. Sci., 27, No. 2, PP 171-179.
- Faltas, R.L. (1977).** Calcic formation in some Egyptian soils. M.Sc. Thesis, Fac. Agric., Cairo Univ., Egypt.
- Faltas, R.L.; El-Awady, R.M.; Selem, M.M. and Abd El-Reheem, M.A. (1986).** Change in physical properties of sandy soil due to sewage water utilization in cultivation for five successive years. I- Particle size distribution, bulk density, total porosity. Annals of Agric. Sci., Moshtohor, Vol. 24(3) 1601-1612, 1986.
- Fawzy, I.R. (1986).** Accumulation and distribution of trace elements in soil profiles of El-Gabal El-Asfar through long term irrigation with waste-water. Ph.D. Thesis, Fac. of Agric. Mansoura Univ. Egypt.
- Fawzy, S.E.; Mohamed, N.A. and Barakat, M.A. (1977).** The effect of nitrogen and salinity levels in nutrients solution on Giza 155 and Mexican wheat varieties. Egypt J. Soil Sci., 17: 79-86.
- Galal, A.Y. (1976).** Iron relationship with soil and plants. M.Sc. Thesis, Fac. Agric. Alex. Univ. Egypt.

- Ghaith, A.M. and Tannious, M.G. (1964).** Mineralogical study of the clay fraction in the top soil of the northern part of the Nile Delta. 8<sup>th</sup> Intrn. Cong. Soil Sci., VII, 29.
- Girhar, I.K. and Yadav, J.S.P. (1982).** Effect of different Mg/Ca ratios and electrolyte concentrations in irrigation water on the nutrient content of wheat crop. *Plant and Soil* 65: 63-71.
- Glattes, F. and Tomiczek, C. (1984).** Application of sewage sludge - a possible cause of increased heavy metal contents in forest ecosystems and wildlife. *Soil and Fert.*, 47(11): 11291.
- Grim, R.E. (1968).** Clay mineralogy. Mc. Graw - Hill Publishing Comp. Ltd.
- Gupta, I.C. (1979).** Use of saline water in agriculture in arid and semi-arid zones of India. Oxford and IBH. Publishing Co. New-Delhi, PP 210.
- Gupta, S.C.; Dowdy, R.H. and Larson, W.E. (1977).** Hydraulic and thermal properties of sandy soil as influenced by incorporation of sewage water. *Soil Sci. Amer. J.* 41(3): 601-606.
- Gupta, T.C. and Abichandana, C.T. (1971).** Seasonal variations in the salt composition of soils of Western Rajasthan irrigated soils with saline water. II: Effect of following and irrigation. *Bhartiya Krishi Anusondhan Patrika* (1): 59-63. (*C.F. Soil and Fert.*, 58: 500)
- Hamdi, H.; Youssef, S. and El-Mansey, M.M. (1966).** The effect of saline irrigation water with different sodium and calcium concentrations on some soil properties. *J. Soil Sci. U.A.R.* 6: 63-71.
- Hamdi, H.M.; Youssef, S. El-Shabassy, A. and Tewfick, Y. (1968).** Studies on the effect of saline irrigation water on chemical composition of clay loam soil. *J. Soil Sci. U.A.R.* 8 No. (1): 7-28.
- Harga, A.A.; El-Kadi, M.A. and El-Kadi, H.A. (1976).** Effect of saline water on corn and cowpea growth under different calcareous soil series. *Desert Inst. Bull, A.R.E.*, 26, No. 2 PP 311-320.

- Hassan-Nouri, A.K.; Drew, J.V.; Knudone, D. and Olsen, R.A. (1970).** Influence of soil salinity on production of dry matter, uptake and distribution of nutrients in barley and corn. 1. Barley (*Hordeum vulgare L.*). Agron. J. 62: 43-45.
- Henry, C.D. (1954).** Sewage effluent disposal through crop irrigation sewage industrial. Wastes, 26 (2): 128, Soil and Fert. 18: 538.
- Hinesly, T.D.; Jones, R.L. and Ziegler, E.L. (1972).** Effect on corn by application of heated anaerobically digested sludge. Compost Sci., 13: 26-30.
- Hinesly, T.D.; Ziegler, E.L. and Barrett, G.L. (1979).** Residual affects of irrigation corn with digested sewage sludge. J. Environ. Qual., 8: 35-38.
- Ibrahim, S.A. (1964).** Studies on the size distribution of water stable aggregates in the soils of the Nile Delta. M.Sc. Thesis, Fac. Agric., Ain-Shams Univ. Egypt.
- Ismail, S.A.A. (1988).** Effect of reclamation stages on soil qualities of some newly reclaimed north bottom lake soils. "Manzala and Idku". Ph.D. Thesis, Fac. Agric., Cairo Univ., Egypt.
- Jackson, M.L. (1958).** Soil chemical analysis. Prentice Hall, Inc., Englewood Cliffs., N.J. Library of Congress, U.S.A.
- Jackson, M.L. (1960).** Soil chemical analysis. Constable and Comp. Ltd.; England.
- Jackson, M.L. (1963).** Soil chemical analysis. Constable and Comp. LTD., England.
- Jackson, M.L. (1969).** Soil chemical analysis. advanced course. Published by author, Wisconsin Univ., Madison.
- Jackson, M.L. (1973).** Soil chemical analysis. Prentice - Hall. Inc. Englewood Cliffs, N.J. U.S.A.

- Kandil, M.F.; Shawky, M.E.; Abdel-Hadi, J. and Fathi, A. (1977).** Effect of salinity and alkalinity on available moisture in soils. Desert, Inst. Bull., A.R.E.; 27, 1: 109-118.
- Kelly, W.P. (1951).** Alkali soils, their formation, properties and reclamation. Reinhold Publishing Corporation, N.Y.
- Kelly, W.P. (1963).** Use of saline irrigation water. Soil Sci. 95, 385.
- Kelling, K.A.; Keeney, D.R.; Walsh, L.M. and Ryan, J.A. (1977).** A field study of the agricultural use of sewage sludge: III- Effect on uptake and extractability of sludge - borne metals. J. Environ. Qual. 6, 352-358.
- Keren, R.; Meire, A. and Kalo, Y. (1983).** Plant spacing effect on yield of cotton irrigated with saline water. Plant and Soil, 74: 461-465.
- Khalil, K.A. (1995).** Soil moisture characteristics of some soils in Kaliobia Governorate. Ph.D. Thesis, Fac. Agric. Moshtohor. Zag. Univ. (Benha Branch).
- Khalil, M.; Anter, I.; Bakhati, H. and Ismail, A. (1977).** Interaction effects of soil alkalinity and salinity of irrigation water on yield of grain and protein of Giza and Mexican wheat. Agric. Res. Rev., Egypt, 55: 63-70.
- Khalil, M.E.A. (1990).** Accumulation of some nutrients and heavy metals in Abu-Rawash Area, Giza Governorate. M.Sc. Thesis., Fac. of Agric., Moshtohor Zag. Univ. Benha branch, Egypt.
- Konrod, J.G. and Kleinert, S.J. (1974).** Survey of toxic metals in Wisconsin. PP. 1-7. C.F. Sidle and Kadros, J. Environ. Qual., 6: 431-437, 1977.
- Kovda, D.V.A. (1958).** Report submitted to the national research center of Egypt and Desert Institute.
- Lal, P. and Singh, K. S. (1974).** A comparative study of the effect of qualities of irrigation water on different soils J. Indian Soc. Soil Sci. 22: 19-25.

- Lasheen, M.R.; El-Gohary, F. and Hussein, I.A. (1979).** Trace metal removal from waste water via chemical treatment. International conference, London, July, 1984.
- Lashin, M.H. and Atanasin, N. (1973).** Studies on the effect of salt concentration on the formation of dry matter, uptake mineral nutrient and mineral composition of cotton plants during the vegetative growth period. Zacker of anzenbu 135(3): 178-186 (C.F. Biol. Abst., 55(5) March: 1973).
- Laster, W.R. (1962).** A study of saline and alkali soils of Oklahoma. Dept. of Agron. Pressed Series, P. 430.
- Laura, R.D. (1974).** Effect of neutral salts on carbon and nitrogen mineralization of organic matter in soil. Plant and Soil, 41: 113-127.
- Lawire, D.S. (1961).** A rapid method for determination of approximate surface of clays. J. Soil Sci., 29: 188.
- Longenecker, D.E. and Layerly, P.J. (1958).** Chemical characteristics of soils of west Texas as affected by irrigation water quality. Soil Sci., 87: 207-216.
- Lotfy, A.A.; Hussien, M.M. and Nour, T.A. (1987).** Effect of salinity and vapour gard on growth and mineral constituents of cotton seedling. Egypt, J. Soil Sci., 27, (1): 1-10.
- Lunt, H.A. (1959).** Bull. Conn., Agric. Exp. Stn. 622, P. 30. (C.F. Berrow and Webber, 1972).
- Mancino, C.F. and Pepper, J.L. (1992).** Irrigation of Turfgrass with secondary sewage effluent. Agron. J., V. 84: 650-654.
- Mass, E.V. (1982).** Salt tolerance of plants. Material prepared for Revision of Handbook 60.
- Mass, E.V. (1984).** Salt tolerance of plants. Handbook of plant Sci. (C.F. Soil Sci. Soc. Amer. J., 49: 672-674, 1985).
- Mass, E.V.; Ogata, G. and Garbet, M.J. (1972).** Influence of salintiy on Fe, Mn and Zn uptake by plants. Agron. J. 64: 793-795.

- Mehra, P.O. and Jackson, M.L. (1960).** Iron oxide removal from soil and clay by dithionite citrate system with sodium bicarbonate buffer. Clay and Aswan Dam. Authority, 20 PP Cairo.
- Mitchell, M.J.; Hartenstein, R.; Swift, B.L.; Neuhauser, E.F.A.; Brams, J.B.I.; Mulligan, R.M.; Brown, B.A.; Craig, D. and Kaplan, D. (1978).** Effect of different sewage sludges on some chemical and biological characteristics of soil. J. of Environ. Qual., 7: 551-559.
- Mitkees, A.I.; Selim, M.H. and Mashaly, A. (1972a).** Effect of salinity on five berseem varieties in relation to their dry matter and nitrogen content. Agric. Res. Rev., Egypt, 50: 19-29.
- Moosa, K.F. (1976).** The effect of salinity and moisture on suction power of cotton plants. M.Sc. Thesis, Fac. Agric. Zag. Univ. Egypt.
- Morel, J.L.; Guckert, A. and Sedogo, M. (1979).** Effect of spreading urban sewage sludge on soil physical properties. Soils and Fert. 42, 7517.
- Morsy, M.A. (1990).** Studies on pollution of some Egyptian soils by heavy metals. M.Sc. Thesis, Fac. Agric. El-Minia Univ. Egypt.
- Mostafa, M.A.; Khaled, E.M.; El-Sweedy, A.M. and Abd-El-Nour A.Sh. (1992).** The effect of irrigation water quality on some chemical properties of certain soils of Egypt. Egypt J. Soil Sci., 32, No. 3 PP 391-406.
- Mostaghimi, S.; Matocha, J. and Cernshow, C.C. (1988).** Effect of sewage sludge on iron chlorosis and yield of grain sorghum grown on calcareous soils. Journal of Plant Nutrition, 11 (6-11), 1397-1415.
- Mozafar, A. (1989).** Boron effect on mineral nutrients of maize. Agron. J. 81(2), 285-290.
- Murphy, B.C. and Lancaster, I. (1971).** Response of cotton to boron. Agron. J. 63: 539-540.
- Mytelko, A.I.; Gzachor, J.S.; Guggino, W.R. and Golup, H. (1973).** J. Water Pollut, Contr. Fed. 45: 1859-1864.

- Narwal, A.P.; Singh, M. and Dahuja, D.J. (1990).** Effect of cadmium on plant growth and heavy metals content of corn (*Zea mays, L.*). Corp. Research, 3, 16, 13-20.
- Omar, M.S. and Aziz, M.A. (1982-b).** The use of saline irrigation water. Its effect on soil properties and plant growth. I. Soil Aggregation. Egypt J. Soil Sci., 22: 11-21.
- Osman, A.T.A.W. (1978).** Influence of some natural local amendments on the reclamation of sandy soils of the Tahreer province. A.R.E. M.Sc. Thesis, Fac. Agric. Cairo Univ. Egypt.
- Paliwal, K.V. and Maliwal, G.L. (1972a).** Effect of fertilizers and manure on mineralization and availability of nitrogen to barely irrigated with different quality water.
- Patanissami, N. and Dahanaplamasi, J. (1973).** Studies on saline irrigation water. II. Influence on soil properties Modras Agric. J., 60, 8, 809, (En) Tanril Nadu. (C.F. Soils and Fert. 38, 1237, 1975).
- Perhac, R.M. (1972).** Environment chemistry of the elements. J. Hydrol. 15: 177.
- Piper, C.S. (1950).** Soil and plant analysis. Inter. Science. Publisher, New York.
- Quirk, J.P. (1955).** Significance of surface area calculated from water vapour sorption isotherm by use of the B.E.T equation. Soil Sci. 80: 425-430.
- Rabie, M.H. (1984).** Studies on some heavy metals in soils of A.R.E. Ph.D. Thesis, Fac. Agric. Ain Shams Univ. Egypt.
- Ramadan, M.A. (1995).** Studies on the pollution of the agricultural environment in Egypt. Ph.D. Thesis, Fac. Agric. Cairo Univ., Egypt.
- Ramdeo and Ruhel (1971).** Effect of salinity on the yield and quality of India rope and lineseed. Indian, J. Agric. Sci. 41(2): 134-136.



- Ramati, B. and Mor, E. (1966).** Utilization of sewage water for the irrigation of field crops on shifting sands. Israel, J. Agric. Res. 16: 59-76. (C.F. Soil and Fert. 30: Abst. No. 1302. 1967).
- Roa, A.R.M.; Katti, V.M.; Pancharajah, S.; Rao, B.K. and Sarath, K.E.R. (1979).** Effect of saline water on chemical properties and microbiological population in black soil. Mysore, J. Agric. Sci., 13: 262-264. (C.F. CAB Abst. Database, 1270947-1972-1982).
- Richards, L.A. (1947).** Pressure membrane apparatus construction and use. Agric. Engr., 28: 451-454.
- Sabet, S.A.; Robishy, A.A.; Wassif, M.M. and Ozoris, M.A. (1976).** The effect of saline water irrigation on yield and composition of plants under different levels of phosphorus fertilization in highly calcareous soils. Desert Inst. Bull., ARE., 26, No. 2, 343-352.
- Saleh, A.M.; Fouda, M.; Abdel Lattif, S. and Wilson, L. (1988).** Inorganic pollution of the Man-Made Lakes of Wadi El-Rayan and its Impact on Aquaculture and Wildlife of the surrounding Egyptian Desert. Archives of Environmental Contamination and Toxicology. Vedag, New York Inc., 17: 391-403.
- Sawhney, B.L. (1969).** Regulating of interstratification as affected by charge density in layer silicates. Soil Sci. Soc. Amer. Proc. 33: 42-46.
- Selem, M.M.; Abdel-Aziz, S.M. and Abu-Zied, W.A. (1989).** Some chemical changes in properties of soil irrigated with drainage water. Annals of Agricultural Science, Moshtohor, Zag. Univ. V., 27(4) 2521-2531.
- Selem, M.M.; Abdel-Aziz, S.M. and Mustafa, F.S. (1989).** The use of drainage water for irrigation cotton. Annals of Agric. Sci. Moshtohor V. 27 No. 3, PP 1917-1927.
- Selem, M.M.; El-Gayar, A.A.; El-Awady, R.M. and Abdel-Gawad, H. (1989).** Effect of irrigation with drainage water on some physical properties of soil. Annal of Agric. Science, Moshtohor, Zag. Univ. V. 27(4): 2533-2545.

- Seyam, H.M. (1989).** Response of nutrient absorption for quality of irrigation water. M.Sc. Thesis Fac. of Agric. Ain-Shams Univ. Egypt.
- Shahin, R.R.; Abdel-Aal, Sh.I.; Abdel-Hamid, M.A. and Abdel-Tawab, M.M. (1988).** Soil contamination with heavy metals and salts produced by industrial activities at Helwan. Egypt J. Soil Sci., 28, No. 4, PP. 407-419.
- Shainberg, I. and Oster, J.D. (1978).** Quality of irrigation water. IIRC Publication, Bet Degan, Israel.
- Shalabi, K.A. (1977).** Studies on the effect of the High Dam on the some properties of suspended matter and soil. M.Sc. Thesis, Fac. Agric., Ain-Shams Univ.
- Shehata, A.A.; El-Badry, D.D. and Hamdy, M. (1983).** Evaluating drainage water quality in some Egyptian Governorates. Egypt. J. Soil Sci. 23: 213-224.
- Shendi, M.M. (1990).** Some mineralogical aspects of soil sediments with reference to both lithology and environmental conditions of formation in Fayoum area. Ph.D. Thesis, Fac. Agric. Fayoum, Cairo Univ. Egypt.
- Soil Survey Staff (1993).** Soil survey manual. United States Department of Agriculture. Handbook No. 18. U.S Government Printing Office, Washington D.C. 20402.
- Stakman, W.P. and Van der-Harst, G.G. (1965).** Directions for the use of pressure membrane apparatus range of 3-4.2. Institute for Land and Water Management Research.
- Tabatabal, M.A. and Frankenberger, W.T.J. (1979).** Chemical composition of sewage sludge in Iowa. Bull. No. 586. 934-944, Dept. of Agric., Iowa state Univ. Amer. Iowa 50011, U.S.A. C.F. Soils and Fert. 1983, 45: 836.
- Tahoun, S. and Hamdi, H. (1973).** Potassium release and clay degradation as affected by sodium chloride. Z. Pflanzenern. Dung & Badenkunde, 136, 33.

- Tayel, M.Y.; Abdella, M.M.; Showky, M.E. and Mohamad, S.A. (1980a).** The effect of moisture stress and Na: Ca: Mg ratio on soil aggregation. Egypt J. Soil Sci., 20, 159-168.
- Ternel, M. (1961).** Soil improvement with peat, decomposed refuse and sewage sludge. Albrecht theer Arch 5: 199-215. (C.F. Soils and Fert. 24: Abst. No. 3327, 1961).
- Tewfick, Y. (1965).** The effect of irrigation with saline waters on some chemical and physical properties of the soils. M.Sc. Thesis, Fac. of Agric. Ain-Shams Univ. U.A.R.
- Thomas, J.R. (1980).** Osmotic and specific salt effect on growth of cotton. Agron. J. 72: 407-412.
- Thorne, D.W. and Peterson, H.B. (1954).** Irrigation soils. Their Fertility and Management. The Blakinston Co. Inc. N.Y.
- Toppey, K.F. and Sabey, B.R. (1986).** Sewage sludge as a coal mine spoil amendment for revegetation in colorado. Journal of Environmental Quality 15(1): 44-49.
- Udo, E.J.; Bohm, H.L. and Ticker, T.C. (1970).** Zinc adsorption by calcareous soils. Soil Sci. Soc. Amer. Proc. 34: 405-407.
- Udovenko, G.V.V.; Sinelinkova and Khozova, G.V. (1971).** Effect of salinity of substrate on nitrogen metabolism of plants with different salt tolerance. Agrokhimiya 3: 23-31.
- Uhland, R.E. (1971).** Soil permeability determination for use in soil and water conservation. USDA Soil Conservation Service SCS. TP. 110.
- U.S. Salinity laboratory staff, (1954).** Diagnosis and improvement of saline and alkali. U.S. Dept. Agric., Handbook No. 60, PP 160.
- Wahab, M.A.M. (1977).** Mineralogical and pedological studies on some Gley soils in the Northern part of the Delta. Ph.D. Thesis, Fac. Agric., Ain-Shams Univ., Egypt.
- Walter, B. (1978).** The effect of a compost of refuse and sewage sludge on soil and on grape yield. Soil and Fert. 41, 1310.

- Waly, T.M.; Abdel-Naim, E.M.; Omran, M.S. and El-Nashar, B.M. (1987).** Effect of sewage water on chemical properties and heavy metals content of El-Gabal El-Asfer sandy soils. *Biological-wastes*, 22:4, 275-284.
- Warington, S.I. (1952).** Effects of using lagooned effluent on farm land. (*C.F. Soils and Fert.*, 14, Abst. No. 1097, 1953).
- Warman, P.R. (1986).** Effect of fertilizer, pig manure and sewage sludge on timothy and soil. *Soils and Fertilizers V.* 49, No. 9.
- Wright, C.H. (Ed.) (1939).** Soil analysis. Thomas Murby and Co., London.
- Yadav, J.S.P. (1978).** Effect of saline irrigation water on soil and crop growth. *Agrokem. Talojtan*, 26, 19-28. (*C.F. Soil and Fert. V.* 41, 1978).
- Zabek, S. (1956).** Water and its quality as factors affecting the reclamation of alluvial sandy soils in the light of lysimeter experiment with grasses. *Roczn. Glebozn*, 5: 203-219.