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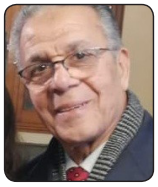
Abstract



Using natural mineral sediments as indigenous alternative sources of fertilizers for sustainable development in developing countries

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Abstract:

Egypt is one of developing countries. The population is increasing fast in Egypt and it is natural that serious attempts are to be made for sustainable development in Egypt. Sandy soils represents about 95 percent of the Egyptian area. To cultivate sandy and sandy calcareous soils in a sustainable manner we have to overcome the problem of the leaching of nutrients, especially potassium. Egypt is dependent on imports of potash fertilizers. In order to reduce the dependence on imported potash fertilizers, many researchers investigated the beneficial commercial uses of glauconite as a fertilizer. In Egypt, huge resources of glauconite are found in the Western Desert. Glauconite is the name given to a group of naturally occurring iron potassium phyllosilicat mineral. Two tested glauconites were applied to the sandy soil at six rates (0, 3,6,9,12 and15 Mg ha-1). Application of each of the two glauconites up to the rate of 12 Mg ha-1 to the sandy soil increased the plant growth and water use efficiency by broad beans and peas plants, compared to control. It could be recommended to use the glauconite at the rate of 12 Mg ha-1 as an amendment for the sandy soil in Egypt. Its application in the field is economic as well as eco-friendly as there is no losses of nutrients from this mineral and its price is cheaper than the imported potash.

Biography:

Morsy M has completed his PhD at the age of 31 years from Tashkent Institute, USSR (1979) and Postdoctoral Studies from California University, Riverside, USA

(1989). He was the Dean of Faculty of Agriculture, Minia University, Egypt (2006 -2008), He has published more than 50 papers in local and international journals.

Recent Publications:

1. Eid, M.A. (2012). Success usage for the glauconite ore as a natural Egyptian potassium fertilizer source. (C.F. Eid, M.A., 2013. Some adsorption characterization of the Egyptian glauconite ore. Egyptian journal of Soil Science, 53:75-88.
2. El-Habaak, G., M. Askalany , M. Faraghaly and H.Mahmoud (2016) The economic potential of El-Gedida glauconite deposits , El-Bahariya Oasis , Western Desert , Egypt, Journal of African Earth Science , 20:186-197
3. Morsy MA, Darwish OH, El-Dawwy NG (2019) Reducing Import of Potash Fertilizer in Egypt by Using Glauconite Deposits as an Indigenous Alternative Source of Potassium. J Earth Sci Clim Change Volume 10 • Issue 2 • 1000508

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