ملخصات الابحاث المقدمة من الدكتورة/ داليا محمد الصوفى محمد

البحث الأول

S.M.Soliman,S.Ghabour,Y.G.M.Galal,**D.M.Elsofi**.A.A.MoursyandM.M.El-sofi(July 2014).Alternative Strategies for Improving Nitrogen Nutrition of some Economical Crops using 15N stable Isotope. International Journal of current Microbiology and applied Scienc Vol.3,No.7,pp.970-983 .

استراتيجيات بديله لتحسين التغذيه بالنتروجين لبعض المحاصيل الاقتصاديه باستخدام نظير النتروجين المستقر

ملخص البحث باللغة الأنجليزية:

Three different economical crops namely sesame, maize and wheat were grown on virgin sand soil. A field experiment was constructed under drip irrigation system. Fertilization treatments were arranged in a complete randomized block design with three replicates. 15N labeled ammonium sulfate with 2% atom excess was applied as a source of mineral nitrogen fertilizer at rates of 100, 120 and 45 kg N fed-1 (hectare equal 2.4 feddan) for wheat, maize and sesame, respectively. Isotope dilution technique was followed to distinguish between the different sources of nitrogen derived by tested crops and quantify their accurate portions. Results indicated that local prepared compost either applied individually or in combination with mineral fertilizer contributed remarkable grain or seed yields as well as total biomass of sesame, wheat and maize. Also, it gave values of dry matter yield and nitrogen gains nearly closed to those of fully mineral fertilized (100% MF) crops. Proportions of nitrogen derived from mineral fertilizer and organic compost revealed that %Ndff in all crops and organs was nearly closed to each other. Similar trend but to somewhat high extent was noticed with portions of N derived from organic composts. In general, nitrogen use efficiency by different crops showed the superiority of local compost (CE) which induces the highest %NUE over all other treatments.It could be concluded that integrated organic and inorganic fertilizers benefits productivity and nitrogen nutritio of sesame, wheat and maize much more than individual fertilization treatments.