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Organic farming for sustainable production of two *Atriplex* species in saline habitats

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Applying organic farming systems in bio saline agriculture is unconventional approach for sustainable using of marginal soil and desert land for planting non-traditional halophytic crops such as *Atriplex* sp. These plants are highly salt tolerant C_4 halophytic forage plants grown well in coastal salt marsh. It has a special place in newly emerging farming systems, especially in coastal areas and where freshwater resources are not available or in short supply. We can call it environmentally smart crops because it ensures food security, contribute to energy security, guarantee environmental sustainability, and tolerate the negative impacts of climate change. Organic agriculture is the most important and widely practiced agro-ecological farming system. It is claimed to be the most sustainable approach and long term adaptation strategy. It emphasizes recycling techniques and low external input and high output strategies. It is based on enhancing soil fertility and diversity at all levels and makes soils less susceptible to erosion. It is also reported to be climate change resilience farming systems as it promotes the proper management of soil, water, biodiversity and local knowledge and provide producers with ecologically sound management decisions. A field experiment was carried out at the Model Farm of National Research Centre, El Tour, South Sinai to study the impact of (charcoal 4 tons/fed, chicken manure 5 tons/fed and compost 5 tons/fed. In addition to control treatment) on some growth characters, photosynthetic pigments content, crude protein content and some physiological aspects as well as nutritive values of two halophytic plant species (*Atriplex halimus* and *Atriplex nummularia*). Our results showed that organic fertilizer treatment enhanced all the previous character as compared with control with superiority to chicken manure over the other treatments.

Biography

Tawfik M M is a Professor of field crops. He completed his Graduation from Plant department, Faculty of Science, Cairo University. He worked at National Research Centre, Dokki, Egypt since 1985. He is interested in the field of forage production, bio-saline agriculture and climate change researches. He has published 101 papers, six books and chapters in books. In addition, he actively participated in oral lecture in 21 international conferences outside Egypt, actively organized many national conferences, workshops and forums in Egypt. He organized and implemented many scientific training in the NRC and many other international and national organizations. He is also working as an Editor in many national and international journals.

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