



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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**MORPHOLOGICAL AND MOLECULAR GENETIC
CHARACTERIZATION OF SALICORNIA
LIVE IN EGYPT**

By

SHAMS AHMED HUSSEIN AHMED HASSAN

B.Sc. Agric. Sc (Genetics), Fac. of Agric., Ain Shams Univ., 2012

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ABSTRACT

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Because water scarcity anticipated to increase within the future especially with the developing global population and rise in prosperity hassle of the shortage of water suitable for the cultivation of food plants inside the international is growing in arid and semi-arid regions. there is the demand to find another plant resource do not need freshwater *i.e* able to grow using seawater. It is worthy to note that *Salicornia* sp. and *Sarcocornia* sp. can be grown on the seawater. Currently, considered one of the most crucial issues dealing in Egypt is a way to provide food within the frame of limiting to be had soils for cultivation, limitation of water resources, especially after Ethiopian Nahda Dam and growing in population. Accordingly, the use of halophytes forage plants (*Salicornia* and *Sarcocornia*) using seawater has emerged as one of the most exciting and intelligent research points. Therefore, a case observe was carried out in 2018 and 2019 to evaluate the nutritional status of *Salicornia* and *Sarcocornia* plants which can be grown on salty s water on the North Coast of Egypt. Five samples of *Salicornia* and *Sarcocornia* amassed from Damietta, Port Said, coastal road and identified depends on phenotypic homes to *Sarcocornia perennis* (DA), *Sarcocornia perennis* (PS), *Sarcocornia fruticosa*, *Salicornia europaea*, and *Salicornia herbacea*. Proximate composition analyses were carried out. It was glaring that, amongst dry biomass, carbohydrate became in the largest proximate compositions within the *Sarcocornia* sp. and *Salicornia* sp. Tissues observed through ash. Molecular evaluation by SCoT techniques turned into done for *Salicornia* and *Sarcocornia*. The SCoT molecular marker techniques reach producing reproducible and dependable amplicons. Even

though that SCoT approach became better in assessment for molecular range and discrimination capacity for all studied *Salicornia* and *Sarcocornia*. The results obtained have shown that the high nutritional value of the plant in terms of protein content, carbohydrates content, and as a result, it is suitable for animal feeds.

Keywords: *Salicornia*, *Sarcocornia* salinity, nutritional, North Coast of Egypt, SCoT Molecular Markers, Genetic diversity, Cluster analysis and molecular distance

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التوصيف المظهري والجزئي لبعض طرز نبات الساليكرونيا في مصر

رسالة مقدمة من

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