

INTRODUCTION

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Desert development is of great national and international interest. This is for different variety of reasons, among these are the substantially extensive increase of population densities and the limitation of natural resources such as arable land, water and energy. Better management of such natural resources would contribute to the major target and ultimate goals in respect of natural resources conservation, ultimate production, and maintaining clean environment. Horizontal agricultural expansion by increasing the agricultural land in terms of sustainable desert development to satisfy the life requirements and of the inhabitant is a must.

Rainfed agricultural area in Egypt occupies about 2-3% of the agricultural land. Although this may not appear to be significant regarding the total agricultural area, it is very vital to the local settlers of such areas.

El-Qasr proviance is located on the North-Western Coast of Matruh Governorate. It belongs to the Mediterranean photo-geographical region with its limited and heterogenous botanical composition that depends on soil fertility, salinity, topography and climatological conditions. Such

area is characterized by its calcareous soil of high pH, very limited and poorly distributed water precepitation (140 mm per year) and the very limited energy and natural vegetative resources as well.

This study was designed to interplant *Medicago arborea* shrubs at different planting population densities and some winter herbaceous fodder crops (either barley or vicia) with acacia using appropriate formula of phosphorus + sulphur under the prevailing environmental desert condition of El-Qasr province at Matruh.