

## **INTRODUCTION**

Salinity of agricultural land is a major problem in many countries of the world. The problem is particularly severe where land is irrigated with poor quality water, and is exacerbated by the arid climates found in these areas, where high rates of evaporation and transpiration can readily lead to excess salt accumulation. It is likely that about one third of all irrigated land is more or less seriously affected by salinity and associated hazards such as alkalinity and waterlogging. Egypt is one of the seriously saline affected countries in Africa especially in North Delta and in some other areas across the country and the problem is increasing. Flax is one of the fiber and oil crops grown in North Delta. Therefore, the main objective of this work aimed to evaluate six genotypes under soil salinity conditions, in relation to yield and its components in addition to fiber and seed quality, in order to find out the tolerant varieties which may be grown in saline soils. The effects of salinity on straw and seed yields and their components and fiber and seed quality were also considered.

It is hoped that the present investigation may add some information for a more efficient use of saline soils in Egypt through detecting some promising flax strains tolerant to salinity.