Introduction

Jojoba (*Simmondsia chinensis*) is an industrial crop with increasing interest, especially in arid and semi-arid regions, as it is considered to tolerate fairly high levels of salinity and water stress (BOTTI et al. 1998). For this crop to be an economically profitable alternative for arid and semi-arid zones, it is necessary to select plants of high productivity under stress conditions.

Salt stress affects many physiological and biochemical processes in plants, resulting in the alteration of some metabolic pathways (FRECHILLA et al. 2001). The nature of salt tolerance is complex and not well understood, but may be attained through salt compartmentation in the cell and within the plant (KHAN et al. 2000). In response to salt stress, many plants synthesize and accumulate osmotically active, low molecular weight compounds such as proline, polyols, carbohydrates, amino acids and organic acids (FRECHILLA et al. 2001; GIRIJA et al. 2002).

Proline through its function as osmoprotectant makes an environment compatible with macromolecular structure and function (GIRIJA et al. 2002). Moreover proline accumulation may reduce stress-induced cellular acidification and proline itself may act as a substrate for respiration, which might provide energy, needed for recovery from stress (AZIZ et al. 1999).

Phenolic compounds are a large group of secondary metabolites, which can play a role in virtually any interaction a plant can have with its environment (WATERMAN and MOLE 1994). These compounds have been implicated to stress resistance against biotic and abiotic factors (BERGMANN et al. 1994, COHEN et al. 1994, WATERMAN and MOLE 1994). On the other hand, there are not so many research data about their role against abiotic ones, such as drought or salt stress, except for their unquestionable role against UV radiation (WATERMAN and MOLE 1994).

Since screening germplasm in saline fields could be time and money consuming, a promising, efficient and simple alternative could be to screen organs or propagules *in vitro* (MILLS and BENZIONI 1992). There is evidence that *in vitro* nodal segments of jojoba respond to...