

**DROUGHT STRESS EFFECT ON SOME BIOCHEMICAL AND PHYSIOLOGICAL
PARAMETERS; ACCUMULATION OF TOTAL POLYPHENOLS AND FLAVONOIDS IN
LEAVES OF TWO PROVENANCE SEEDLING *PISTACIA LENTISCUS***

FATMA CHEHRIT-HACID¹, AREZKI DERRIDJ², FARIDA MOULTI-MATI³ & ABDERRAHMANE MATI⁴

¹M. Maamri University, Department of Biology, Laboratory of Biochemistry and Biotechnologies, Tizi-Ouzou, Algeria

²M. Maamri University, Department of Agronomy, Laboratory of Natural Resources, Tizi-Ouzou, Algeria

^{3,4}M. Maamri University, Department of Biochemistry, Laboratory of Biochemistry and Biotechnologies, Tizi-Ouzou, Algeria

ABSTRACT

In Mediterranean climate which characterized by warm, dry summers, cool and wet winters, drought stress affects growth and survival of species. Study of the impact of drought on some biochemical features would contribute to understand strategies of *Pistacia lentiscus* to cope with Mediterranean field conditions. Seedlings of *P. lentiscus* were subjected to summer drought in greenhouse by without watering. Seeds of plants growing in the Azazga region (North Slope of Kabylie) and Bouira one (southern slopes of Kabylie) were used to obtain seedling. Relative water contents, proline (osmotic solute), pigments, lipid peroxidation, total polyphenols, total flavonoids are investigated. Drought induced a slight but significant decrease in relative water content and an increase in the proline level indicating the maintenance of osmotic balance. Total polyphenols and total flavonoids were not influenced by the drought.