



4th National Congress on Medicinal Plants
12, 13 May 2015
Tehran- Iran



ISSN 1735-0328



A Quarterly Publication of the School of Pharmacy
Shaheed Beheshti University of Medical Sciences

**Proceedings of the 4th
National Congress of Medicinal Plants
12, 13 May 2015, Tehran**

Iranian
Journal of
Pharmaceutical
Research

IJPR

Iranian
Journal of
Pharmaceutical
Research

Volume 14, 2015, Supplement 2



4th National Congress on Medicinal Plants
12, 13 May 2015
Tehran- Iran



POSTER PRESENTATIONS



207

**EFFECTS OF PRIMING TEMPERATURE AND OSMOTIC POTENTIAL
ON SEEDLING EMERGENCE AND GROWTH OF SAVORY
(*SATUREJA KHUZESTANICA* JAMZAD) UNDER DROUGHT STRESS**

Eisvand, Hamid Reza^{1,*} Sharafi, Asghar¹

¹*Department Of Agronomy and Plant breeding, Lorestan University, Khorram Abad, Iran*

Satureja khuzestanica is one of the nine endemic savory species of Iran [1, 2]. Drought stress is one of the most unfavorable factors for seedling establishment and growth in main parts of Iran. Emergence of the most plants is affected by drought and decreased. One way to improve seeds and seedlings to cope with stressful conditions is seed priming. Priming as a technique can improve emergence rate and uniformity, increase seedling competitiveness and also increase range of stress tolerance under stressful conditions. This research conducted in order to study the effects of priming temperature and osmotic potential for improving seed and seedling performance of *Satureja khuzestanica* Jamzad under drought stress condition. A green house research was carried out as a factorial experiment in base of randomized completely block design with three factors and four replications. The factors were including drought stress (50% and 25% of field capacity) with control (75% of FC), priming osmotic potential (0, -4, -8 bar prepared by PEG 6000) [6] and priming temperature (15 and 25 °C). The percent and rate of emergence, and leaf area decreased with increasing in drought stress. Root length increased by increasing drought meanwhile root dry matter decreased. So root morphology of savory affected by drought progress and tend to forms more thin and lengthy root. Interaction of drought stress and osmotic potential of priming was significant on percent and rate of emergence. The interaction of priming temperature and priming osmotic potential was significant on the percent and rate of emergence. Hydro-priming at 15 °C had the most positive effect on the percent and rate of emergence, root length and leaf area. Overall, seed quality was better when priming temperature was lower (15 °C). Hydro-priming mitigated drought stress till 50% FC and it was not useful at 25% FC.

References

- [1] Rechinger, K.H. 1982. Akademische Druck Verlagsantalt Graz; 495–504.
[2] Sefidkon, F.; Sadeghzadeh, L.; Teimouri, M.; Asgari F.; Ahmadi, Sh. *Iranian Journal of Medicinal and Aromatic Plants*. **2007**. 23 (2), 174-182. [in Persian With English summary]



4th National Congress on Medicinal Plants
12, 13 May 2015
Tehran- Iran

