



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



1577

**EFFECT OF MOIST-PRE CHILLING AND 24-EPIBRASSINOLIDE ON
 BREAKING SEED DORMANCY IN *ECHINACEAPALLIDA*(NUTT.)
 NUTT**

Motevasel, Najmeh^{1,*}, Rouhi, Vahid¹, Mohamadkhani, A.¹

¹*Horticultural Department, Shahrekord University, Shahrekord, Iran*

E-mail: Na.motevasel@yahoo.com

Echinacea pallida (Nutt.) is a species of herbaceous perennial plant in the family Asteraceae. *Echinacea pallida* is also known as the Pale Purple Coneflower is one of the more rare members of the Echinacea family, well known for their medicinal use in boosting the immune system, anti-allergy, antibiotic, healing wounds and prevention of catching cold. That is why propagation of this plant has main importance. Since propagation of seeds is one of the main methods of propagation plants and with attention to variety of genetic and seed dormancy of *Echinaceapallida*, this research is trying to find a proper method for breaking seed dormancy of *Echinaceapallida*. In order to reach this purpose two experiments is conducted in a completely of randomized design with 3 replicates and two treatments. Treatments contain moist-pre chilling at 5, 10 and 15 °C for 2 weeks and 24-epibrassinolide with concentrations of 0, 0.5, 1 and 2 ppm. The maximum percent of germination (95%) is observed in moist-pre chilling treatment in two weeks at 10°C temperature. According to the results, seed dormancy in *Echinacea pallida* is physiological. Factors involved in seed dormancy is premature plant or deterrent factor in seed or both. The maximum percent of germination is obtained in 24-epibrassinolide treatment in 1 and 2 ppm concentrations [1, 2].

References

- [1] Barrett, B. P.; Brown, R. L.; Locken, K.; Maberry, R.; Bobula, J. A.; D'Alessio, D., *Ann. Intern. Med.* **2002**, *137* (12), 939–46.
- [2] Parmenter, G.; Brgmans, J.; Burton, L.; Douglas, M.; Follett, J.; Gray, G.; Smallfield, B. *Proceedings of the Agronomy society of New Zealand.* **1992**, *22*, 61-65.