OP365

Successful Breaking Seed Dormancy of Imatture Seeds of Charismatic and Endemic *Hyacinthella lineata* L. Under *In vitro* Conditions

Mehmet Ugur YILDIRIM[1], Mortaza HAJYZADEH[1], Ercument Osman SARIHAN[1], Khalid Mahmood Khawar[2], Fethi Ahmet OZDEMIR[3]
[1]Department of Field Crops, Faculty of Agriculture and Natural Sciences, Usak University, 1 Eylul Campus, 64200 Usak, Turkey
[2]Department of Field Crops, Faculty of Agriculture, Ankara University 06110 Diskapi, Ankara, Turkey
[3]Department of Molecular Biology and Genetics, Faculty of Science and Arts, Bingol University, 12100, Bingol, Turkey
ugur.yildirim@usak.edu.tr

Aim of the study: Ten species of *Hyacinthella* with various shades of charming white to violet colored flowers grow on many diverse habitats under wide variety of conditions on the soils of Turkey. According to United Nations Convention on Environment and Development (UNCED), loss of habitats and species is a major issue in sustainable forest management and conservation of biodiversity worldwide.Very little research has been conducted on conservation of this species that stay dormant underground for a long time. The objective was to multiply these plants to conserve biodiversity in relation to this plant by developing techniques for its restoration.

Material and Methods: This study evaluated germination potential of immature seeds of *Hyacinthella lineata,* an endemic species on MS medium enriched with 0.50 mg/L BAP+0.6 mg/L NAA, 1.00 mg/L BAP+0.6 mg/L NAA and 1,50 mg/L BAP+0.6 mg/L NAA to break seed dormancy.

Results: The highest germination percentage was observed on MS medium containing 1mg/l BAP+0.6 mg/l NAA. The immature seeds growing on control treatments containing MS medium did not germinate. This result was consistent for different concentration of BAP+0.6 mg/L NAA. Generally germination increased in linear line up to MS medium containing 1 mg/l BAP+0.6 mg/L NAA in the culture medium. Thereafter, following concentrations of BAP+0.6 mg/L NAA in MS medium had a significant negative effect on *H. lineata* immature seeds germination. The described protocol could be affectively used for multiplication of this plant for biodiversity conservation by its applications in forestry, horticulture, and landscaping industry.

Acknowledgements: The authors acknowledge support of the Department of Field Crops, Faculty of Agricultural and natural Sciences, Uşak University, Uşak Turkey.

Keywords: *Hyacinthella lineata*, endemic, regeneration, immature seeds, dormancy.