Effect of irrigation period, seed provenance, sowing bed and sowing date on germination rate of Cupressus sempervirens seeds.

Fedra Mirsaleh Gilanipour*,Dr. Bahram Naseri,

Abstract The impacts of irrigation interval, seed origin, substrate, and sowing dates were studied on the germination of Mediterranean cypress (Cupressus sempervirens var. Horizontalis) seeds in Pilembera Nursery, Rezvanshahr (Western Guilan Province). The seeds were supplied by Khazar Amol Forestry Seed Center. Their initial qualities were assessed in this center's technical laboratory including their physical traits (moisture, purity and 1000-seed weight) and physiological traits (germination percent). Then, they were sown in plastic pots under four treatments including soil (at four levels), irrigation interval (at three levels), seed origin (at three levels), and sowing date (at two levels) with five replications. The germinated seeds started to be counted as soon as the first germinated seed was observed. Data were statistically analyzed by SPSS 20 Software Package. After it was shown that the data were not normal, the effect of treatments was studied on germination and seedling height by non-parametric methods of Kruskal-Wallis and Mann-Whitney U tests. Also, the most important variable in predicting seeds' success was specified by multiple regression analysis. According to the findings, the seeds of the studied species were influenced by irrigation interval, substrate, and sowing date, so that the highest germination was observed in seeds sown in February in sandy soil fertilized with manure and irrigated on a daily basis. Correlation analysis revealed that the number of germinated seeds was positively correlated with sowing date and substrate and was negatively correlated with irrigation interval. Seedling height showed negative correlation with irrigation interval and substrate and positive, significant correlation with sowing date. Among all studied factors, sowing date and substrate were found to be the most appropriate predictors of the success of Mediterranean cypress's seeds at nursery level.

Keywords : Keywords:Mediterranean cypress,Sowing date, Viability,Nursery,To grow