SEEDLING EMERGENCE IN THE ENDANGERED JUNIPERUS OXYCEDRUS SUBSP. MACROCARPA (SM.) BALL IN SOUTHWEST SPAIN

ROCÍO JUAN, JULIO PASTOR, INMACULADA FERNÁNDEZ*, AND JUAN CARLOS DIOSDADO

Department of Plant Biology and Ecology, University of Sevilla, Box 1095, 41080 Sevilla, Spain

*e-mail: ifernan@us.es

Received April 10, 2006; revision accepted July 20, 2006

Juniperus oxycedrus subsp. *macrocarpa* is an endangered species in southwest Spain, with seed dormancy as found in other species of the same genus. This study employed different experiments to determine a method to improve the seedling emergence in this species. Three types of seedling emergence trials were performed: (a) untreated seeds under greenhouse conditions, (b) untreated seeds under natural conditions, and (c) treated seeds under greenhouse conditions, with different acids (sulphuric, hydrochloric and nitric) for 10 and 30 min, followed or not by cold stratification for 3 months. In all trials, seeds derived from both mature and immature cones were used to verify which one produced higher seedling emergence. Previously, seed viability was verified and a proper substrate for greenhouse sowing was selected. The best percentage of seedling emergence was obtained in the "a" and "b" trials. In "a" trial, seeds derived from immature cones germinated significantly better than mature ones. Chemical scarification of seeds with or without cold stratification yielded less seedling emergence than the other trials.

Key words: Cupressaceae, *Juniperus oxycedrus* subsp. *macrocarpa*, dormancy, seedling emergence, viability.