

# SER2011

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### **Challenges for seedling production for forest restoration in Ocean Island: The case study of protected areas of Fernando de Noronha/PE – Brazil**

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Since its discovery, in 1503, the island of Fernando de Noronha has suffered innumerable anthropogenic disturbances, and degraded terrestrial areas are nowadays part of its landscape, despite the beauty of its sea ecosystems. During the period the island was used as a presidium, the largest trees were cut in order to avoid the escape of prisoners by boats. Inserted in this scenario, the present study sought to investigate the phenology, seed germination, and seedling establishment of native species of the Atlantic island of Fernando de Noronha, Brazil. The main island of Fernando de Noronha was studied through tracks, where phenological data of 20 native species of trees and bushes were collected every fifteen days. Mature fruits of the same species were collected from the most preserved areas and taken to the forest nursery where pre-germinative treatments on the seeds were tested. The seedlings were planted in an area of 1 hectare and had their development accompanied individually. It was possible to identify, based on phenological data, the species locations and periods of fructification. The different treatments applied on the seeds provided improved germination consistently, which varied from 8% to 90%. In the field area, it was observed an average of 70% rate of seedlings survival. In spite the climatic and edaphic difficulties encountered in ocean islands, seed and seedling production, as well as the initial establishment of seedlings in the field, were successful in Fernando de Noronha, which shows favorable perspectives for forest restoration even in isolated oceanic islands.