

The importance of light on the regeneration of *Araucaria angustifolia* (Bertol.) Kuntze populations at São Francisco National Forest, RS, Brazil. Duarte, LS¹; Rosa, LMG; Dillenburg, LR.

Departamento de Ecologia, IB-UFRGS. ¹e-mail: lsduarte@ecologia.ufrgs.br. Porto Alegre, RS.

Brazilian pine's successional status has been discussed by many authors. While some authors consider the species as a pioneer, even in its more typical formations, others consider araucarian forests as temperate vegetational types, which has been slowly substituted by broad-leaved tropical forests. The objective of this study was to analyze the establishment of brazilian pine seedlings under different regimes of natural irradiance. Three different sites were selected at São Francisco National Forest, a *Pinus* plantation (PI), an *Araucaria angustifolia* plantation (RA) and an araucarian natural forest (MN). At the sites were analyzed (1) the population structure of brazilian pine, (2) the vegetation architecture (FAI and relative cover), (3) the light regime above araucarian seedlings or at random points, and (4) the height growth and survivorship of seedlings and sprouts. Sites PI and RA showed a colonization or regeneration process of brazilian pine, due the presence of seedlings at the sites. At MN, brazilian pine seedlings were not found. Architecturally, MN showed higher FAI, canopy and understory cover values than RA and PI. RA showed higher FAI and canopy cover than PI; however, both RA and PI presented similar understory cover values. In spite of the architectural differences, MN and RA showed similar light conditions, characterizing poorer light environments when compared with the PI site. The discrepancy between architecture and light conditions observed between RA and MN can be explained by means of the clumping of seedlings at dense parts of RA site understory. At PI site, seedlings have grown more than at RA. Seedlings and sprouts at RA had similar growth. Results show that araucarian seedlings survive under natural low PAR quantities. At RA site, regeneration strategy of *A. angustifolia* involves sprouting from logged trunks and formation of seedling banks. CNPq.