



WFC 2009

XIII^o Congreso Forestal Mundial
XIIIth World Forestry Congress
XIII^e Congrès forestier mondial
Buenos Aires | Argentina

XIII World Forestry Congress ABSTRACTS

18 - 23 october 2009

<< BACK

Español

ORAL PRESENTATIONS

POSTERS (COMING SOON)

SIDE EVENTS

SEARCH ABSTRACTS AND FULL PAPERS

TITLE:

AUTHORS:

THEME:

SUBTHEME:

Title: Mixed forests plantatios with naturalized broadleaves and nitrogen fixing species

Authors: Monteiro, Maria Do Loreto; Caldas, Sandra; Patrício, Maria Do Sameiro; Nunes, Luís Filipe; Pereira, Ermelinda

Thema: 2. Producing for development

Subtheme: 2.4 Maintenance and increase of productive capacity of forests

Abstract of the paper: Two experimental trials of planted forest were established in Northeast of Portugal, in 1998, concerning the Project PRAXIS XXI – 3/3.2/Flor/2127/95. Each essay is composed by main broadleaves species to produce high quality timber. These species are mixed with secondary N-fixing trees. One trial has thirty six plots concerning twelve diferents treatments with three replications, composed by main species: *Prunus avium*, *Juglans nigra* and *Fraxinus excelsior*, in association with *Alnus cordata*. The other trial has thirty plots correspondents a ten diferents treatments with three replications, is arranged by main species: *Prunus avium*, *Quercus rubra* and *Castanea sativa* in association with *Robinia pseudoacacia*. The aim is to study the possible benefits among the production of the main species, the presence of N-fixing species, and so dendrometric data were collected in all plants of each essay. At the same time, the rate of survival of each species was calculated. On the other hand, following Raison et al. (1987) methodology, incubations were performed in situ soil, in order to evaluate the possible profits of nitrogen on the soil, and also its effects of the main species. The results show that the main species grow better in height and diameter when associated with the N-fixing trees, comparatively with the respective monocultures. The availability of nitrogen, measured for the amount of N-NH₄⁺ and N-NO₃⁻, doesn't show significant differences throughout the period of study and among the plots in analysis. Such can be due to the fact that we are dealing with very young mixed plantation and because the data collected refer to a period that was relatively short and particularly dry. These study concerning very young mixed plantations and can be researched along. To these stands are attributed high importances because they are much more natural, sustainable and stable, with big diversity and they improve the landscape aesthetic. Key-words: Mixed forests plantations; main species (*Prunus avium*, *Juglans nigra*, *Fraxinus excelsior*, *Castanea sativa* and *Quercus rubra*); secondary N₂ fixing species (*Alnus cordata* and *Robinia pseudoacacia*).

Email: loreto@ipb.pt, scalda@ipb.pt, sampat@ipb.pt, lfnunes@ipb.pt, epereira@ipb.pt