

GENERAL INFORMATION

author(s)	Lootens P
year	1996
English title	Impact of an increased atmospheric CO ₂ level on photosynthesis, growth and development of <i>Populus x interamericana</i> cv. 'Beaupré', <i>Quercus robur</i> L., and <i>Pinus sylvestris</i> L.
original title	Invloed van verhoogd atmosferisch CO ₂ -gehalte op fotosynthese, groei en ontwikkeling bij <i>Populus x interamericana</i> cv. 'Beaupré', <i>Quercus robur</i> L. en <i>Pinus sylvestris</i> L.
reference	PhD thesis, Ghent University, Ghent
pages	186
type	dissertation (d1)
ecosystem service	supporting – photosynthesis
keywords	primary production, biomass, C
taxa	<i>Populus x interamericana</i> cv. 'Beaupré' – <i>Quercus robur</i> – <i>Pinus sylvestris</i>
project	PhD Lootens
supervisor	Lemur R
institution	Laboratory of Plant Ecology
document	hardcopy
data	

MATERIALS & METHODS

study area	3e, 5n (scientific zone)
time period	1991–1994
goal	Extrapolation of differences in netto primary production due to doubled atmospheric CO ₂ concentration, from young to old trees
set-up	Young trees growing in controlled conditions (ambient and elevated CO ₂ levels) Young trees growing in plantations (ambient CO ₂): 2-year old oak seedlings and poplar cuttings planted in spring 1991 and 1992 (60 individuals each) Adult model trees (ambient CO ₂): oak in the Aelmoeseneie forest
data collection	model trees: crown projection during 1992, dbh and height at the end of growing seasons 1991, 1992, 1993, 1994 + see Ganne_1994_th
remarks	Chapter 4 uses data from the Aelmoeseneie forest. Reflection and transmission coefficients were determined for adult <i>Quercus robur</i> , using the measuring tower.

RESULTS

Fast-growing trees at ambient CO₂ levels, showed a larger response to an increase in CO₂ concentrations. Extrapolation of the results from the laboratory to field conditions seems dubious for oak, seeing the large differences between lab and plantation seedlings.