GENERAL INFORMATION

author(s)	Flamée M
year	1968
English title	Study of the characteristics of oak leaves in different growing conditions in the stand and for different positions of the crown
original title	Onderzoek naar de lichtkarakteristieken van eikebladeren volgens verschillende posities in het bestand en in de verschillende zones van de boomkroon
reference	Msc thesis, Ghent University, Ghent
pages	72
type	dissertation (d2)
ecosystem service	supporting – photosynthesis/forest dynamics
keywords	morphology - physiology
taxa	*Quercus robur*
project	
supervisor	Van Miegroet M
institution	Laboratory of Forestry
document	hardcopy
data	

MATERIALS & METHODS

study area	5c, 5d, 5e, 5f, 5g, 5i, 5j, 5n, 6b
time period	August
goal	Study the impact of light intensity on leaves of pedunculate oak.
set-up	3 oak trees in different light conditions (free, free top shoot, overtopped) different parts of the tree crown: top crown layer, middle crown layer, bottom crown layer + north, east, south, west 75 leaves per combination
data collection	morphology: length, thickness, fresh and dry mass, thickness main vein physiology: chlorophyll content (spectrophotometer), respiration (manometer Warburg), photosynthesis (manometer Warburg)
remarks	crown and side projections of the studied oak trees and their neighbouring trees

RESULTS

Leaf thickness, thickness of the main vein, and fresh and dry biomass were larger in higher light availability (sun tree, top crown layer). No differences for leaf length. Biomass is largest for south-oriented leaves, smallest for north-leaves.

Chlorophyll content per leaf area largest in high light conditions (sun tree, top crown layer). Chlorophyll content per fresh biomass: increase with light availability for shade leaves, decrease for sun leaves. Respiration intensity and photosynthesis were highest for high light intensity (sun tree, south orientation).