

GENERAL INFORMATION

author(s)	Haleplis KD, Vakalopoulos VS
year	1993
English title	Carbon accumulation and pH variation in a mixed hardwood stand
original title	
reference	MScThesis, Ghent University, Ghent
pages	74 (+ appendix)
type	thesis
ecosystem service	regulating: climate – supporting: soil formation and fertility
keywords	C-sequestration – pH – tree species effect
taxa	<i>Fraxinus excelsior</i> – <i>Fagus sylvatica</i> – <i>Quercus robur</i> – <i>Larix leptolepis</i> – <i>Acer pseudoplatanus</i>
project	
supervisor	Lust N
institution	Laboratory of Forestry
document	hardcopy
data	Table 3.1 p27 (litter BM & C) and 3.2 p 28 (soil C), 3.6 p 32 (pH-H ₂ O), 3.7 p 33 (pH-KCl), 3.8 p 36 (coordinates plots + plot numbers p 35), 3.9 p 37 (coordinates trees), 3.10 p 38 (% cover tree species)

MATERIALS & METHODS

study area	5n (scientific zone)
time period	
goal	gaining insight into the effect of tree species on carbon sequestration and pH
set-up	- 76 plots of 10 m x 10 m on a grid - 50 cm x 50 cm sampling frame at the center of the plots
data collection	- L, F, H horizon (dried at 70°C, 48 h) - 0-5 cm, 5-15 cm, 15-50 cm, 50–100 cm soil samples (air-dried) - Carbon content (Walkley & Black) - pH(H ₂ O), pH(KCl)
remarks	

RESULTS

Cover of ... ↗	C content LFH	C content soil	C content total
<i>Fraxinus excelsior</i>	↘ (1200–200 g/m ²)		↗ (11000–14000 g/m ²)
<i>Quercus robur</i>	↗↘ (max 1600 g/m ²)	↘	
<i>Fagus sylvatica</i>	↗ (max 1600 g/m ²)	↘	

Similar effects on C content: (*Fagus sylvatica*, *Quercus robur*, *Larix leptolepis*) and (*Fraxinus excelsior*, *Acer pseudoplatanus*). Relationship between C content in LFH – soil ↘ ↗ (minimum at 1400 g/m² (soil)).

Cover of ... ↗	pH LFH	pH soil
<i>Fraxinus excelsior</i> & <i>Acer pseudoplatanus</i>	↗	↗ (increase ↘ with depth)
<i>Quercus robur</i> , <i>Fagus sylvatica</i> , <i>Larix leptolepis</i>	↘	↘