

## GENERAL INFORMATION

author(s)	Lust N
year	1973
English title	Study of the pigment concentration of ash in different growing conditions
original title	Etude sur la teneur en pigment de frênes qui croissent dans des conditions différentes
reference	Sylva Gandavensis 37
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ecosystem service	supporting – forest dynamics
keywords	regeneration
taxa	<i>Fraxinus excelsior</i>
project	PhD Lust
supervisor	Van Miegroet M
institution	Ghent University, Laboratory of Forestry
document	hardcopy, pdf
data	

## MATERIALS & METHODS

study area	3b
time period	
goal	Gain insight into the light/shade character of ash by studying its pigment concentrations
set-up	<ul style="list-style-type: none"><li>- 20-year-old seedlings (h 40–60 cm): transplanted in Virelles (shade) and Gontrode (light)</li><li>- 1-year-old nursery seedlings (h 40–60 cm): transplanted in Virelles (shade) and Gontrode (light)</li><li>- 15-year-old natural regeneration (h 6–7 m) in Virelles: dominant, co-dominant, understory</li><li>- 10-year old planted regeneration (h 6–7m) : dominant, co-dominant, understory</li><li>- Mature ash tree: leaves of the dominated layer</li></ul>
data collection	Chlorophyll a, chlorophyll b, carotenoid (xanthophyll and carotene) content (July, August, September) with a spectrophotometer
remarks	

## RESULTS

- Chlorophyll concentration/dry weight was higher in the shaded conditions in Virelles (particularly for the transplanted nursery seedlings). The reaction on change in light condition was strongest for the nursery plants.
- Carotenoid concentration/dry weight was much lower, but was also largest in Virelles and the strongest reaction was found for the nursery plants.
- Chlorophyll concentration/leaf area shows different results: concentration was larger for shade plants (Virelles) than for light plants (Gontrode). Carotenoid concentrations larger in light conditions.
- The chlorophyll b content still increases between August and September for the shaded Virelles seedlings and the full-light nursery seedlings. Little change in the chlorophyll a and the carotenoid content.